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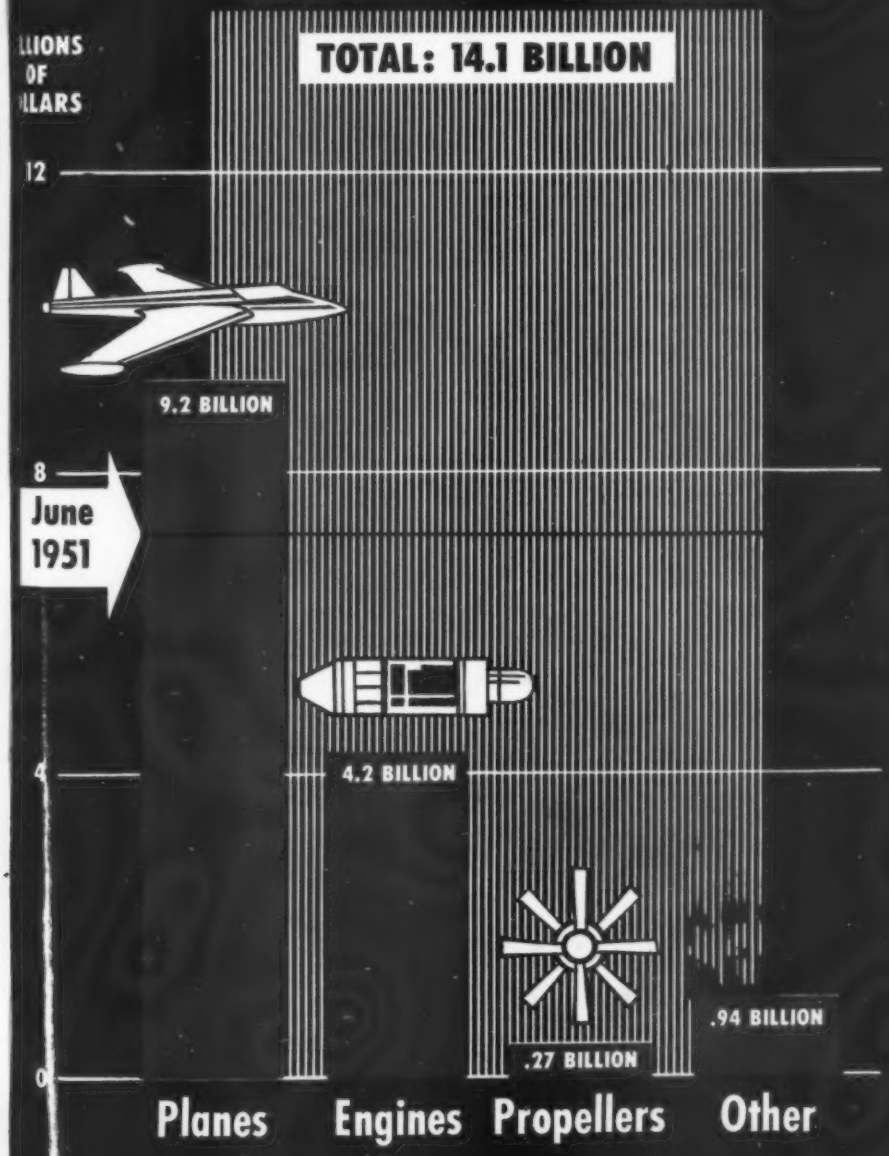

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How big is the backlog? 16

Rebirth of the Luftwaffe? 13

★

Strikes may mean wide shutdowns ... 15

★

$400 million: MSA's 1953 air program .. 18

★

First details on new Fokker 22

CAB analyzes coach costs 27

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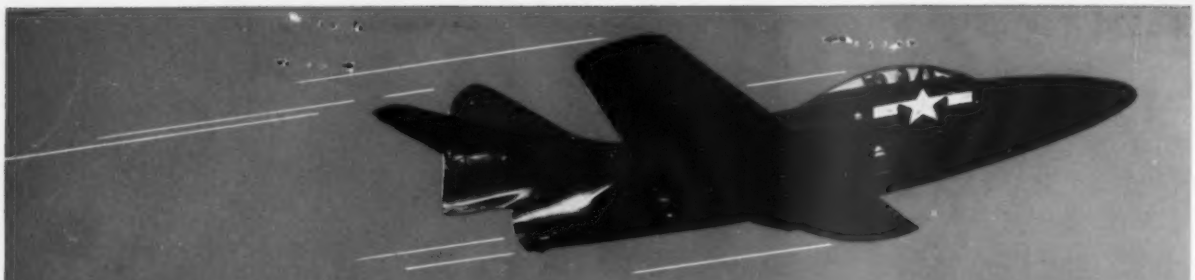

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AIRTRENDS

Despite repeated criticism of the aircraft production program, deliveries to the Air Force in August were up to 8,500,000 airframe pounds from 1,500,000 in August, 1950, when the big push started.

•

BOAC is willing to surrender one or two Comets from its production quota to any dollar airline ordering the jet transport. Feeling in Britain is that some operators might be more anxious to talk business if they could have a few planes soon for "show case" flying pending delivery of production planes.

•

Wright's new turboprop engine, announced earlier this month (AMERICAN AVIATION, September 15) is the T-49. It develops more than 10,000 horsepower.

•

Lockheed will show its latest jet transport design, completely modified from the earlier L-193 design, in October. Lockheed will be offering choice of P&W J-57 or Wright J-67 Olympus.

•

A government war risk insurance program has been drawn up and is at the White House awaiting President Truman's signature. Airlines will be able to get insurance on hulls, cargo, and bodily injury under the terms of the program, authorized by Public Law 47 of the 82nd Congress.

•

If the U. S. and Mexico can get together on a bilateral air transport agreement it may serve as a basis for early agreements between the U. S. and other Latin American countries, including Venezuela and Cuba, where relations have been most delicate for the past few years.

•

Disagreements between U. S. domestic and international airlines over the design requirements for an American built jet transport are giving the manufacturers a hard time. Seating capacity of 100-120 and cruising speed of 500 miles per hour or more are common requirements, but field requirements and interior configuration are controversial.

•

Boeing Airplane Co. has dropped plans to try to sell C-97's, military versions of the Stratocruiser, to commercial airlines.

•

German personnel now working for a Latin American carrier are likely to return home to pass on their know-how to Germany's new airline, now in the embryo stage. German airline plans are moving fast. Indication is that the new company will join IATA at earliest opportunity and will become a strong force.

•

National Airlines, whose recent annual report stated that possible mergers were being "canvassed carefully," is reported to have had recent merger talks with Northeast Airlines.

The Washington View

Unification: Five Years of What?

Five years ago this month the Air Force was separated from the Army and the Defense Department came into existence. Since the passage of the Unification Act, there have been four Secretaries of Defense (Forrestal, Johnson, Marshall, Lovett); three Army Secretaries (Royal, Gray, Pace; three Navy Secretaries (Sullivan, Matthews, Kimball); and two top men in the Air Force (Symington, Finletter). What else has been accomplished aside from turnover of the top men?

There have undoubtedly been many improvements and some economies resulting from the unification, and any Pentagon public relations man will be glad to point them out. But many of the issues that caused tension between branches back in 1947 remain pretty much unchanged:

• **Just before and after** unification, each of the three services was getting roughly one third of the money appropriated for Defense. In fiscal 1953, air power's importance was noted slightly but the pie was still, like Caesar's Gaul, basically divided into three parts.

• **About the time** the services were unified, the Navy and the Air Force were engaged in a not-very-secret feud over which branch was better qualified to handle strategic bombing. The USAF was betting on the Convair B-36 and the Navy was claiming carriers moving in close to enemy targets could do a better job of delivering the atomic bomb. It would not be accurate to state that this feud has been settled, even though the discussions are not as public as they used to be.

• **Army and Air Force** views on the use of tactical air power, i.e., ground support, remain diametrically opposed. The Army favors low-flying fighters to strafe enemy troops near the front lines (as Marine and Navy pilots protect Marine fighting men) the Air Force places priority on fighter-bombers to knock out enemy supply lines.

New Tools, New Men

Government officials are going to have to find a new bottleneck if plane production falls behind schedule again because the machine tool shortage, long blamed for delaying aircraft output, is just about over. Military and civil mobilizers admit that almost all the required tooling for mass production has been completed, their principal job now being to see that the tools are fully utilized.

Recent naming of Henry H. Fowler as director of the Office of Defense Mobilization indicates as much. Fowler is not a production man (as was his predecessor Charles E. Wilson) but is a top-notch administrator. But production as such has not been ignored. Defense Secretary Lovett picked Hugh Dean, a retired General Motors vice president, to be his assistant for production as a replacement for Clay P. Bedford, who became Chase Aircraft's president after leaving Government service.

Tying in with all this is the fate of NPA. That agency, which until now has handled requests for steel, copper, and aluminum supplies for non-defense producers, is just about on the way out. When Fowler became Defense Mobilizer he retained his title as DPA chief (planning to merge ODM and DPA) but gave up as NPA Administrator. NPA has been a sort of stepchild between ODM and the Commerce Department, but present plans are to place it completely under Commerce Secretary Sawyer. As a matter of fact, it was Sawyer who picked the new NPA head, Richard A. McDonald, of Crown-Zellerbach Corp.

The Word For Today: Merge!

The current wave of airline mergers will keep the Civil Aeronautics Board so busy in the next few months that the agency will be unable to come up with any recommended mergers of its own. But the airlines themselves may be asking for approval of many more on their own.

In addition to presently proposed consolidations of Colonial-Eastern, Colonial-National, Chicago and Southern-Delta and Delta-Northeast, several other mergers have been discussed on various occasions in the past. Among them are possible combinations involving National and Northeast, Braniff and Continental and National and Northwest. And Capital, whose proposed union with Northwest fell through because NWA stockholders failed to approve the plan, must certainly be ready to dicker with other lines to improve its position.

CAB officials are said to have the nucleus of a master airline plan in their minds but are willing to make any modifications that are economically advantageous to the airlines involved as well as the nation as a whole. The day that some master plan involving fewer but stronger airlines becomes a reality is getting much closer than many observers think.

News of Jet Transports

Companies planning to build jet transports in this country (Douglas, Boeing, Lockheed) will have no trouble obtaining the materials and little more in getting the gas turbine engines to power them. NPA-DPA officials indicate that when any of the firms get ready to build a prototype, all they will have to do is ask for the steel, copper, and aluminum required and approval will be almost automatic.

. . . Robert M. Loebelson

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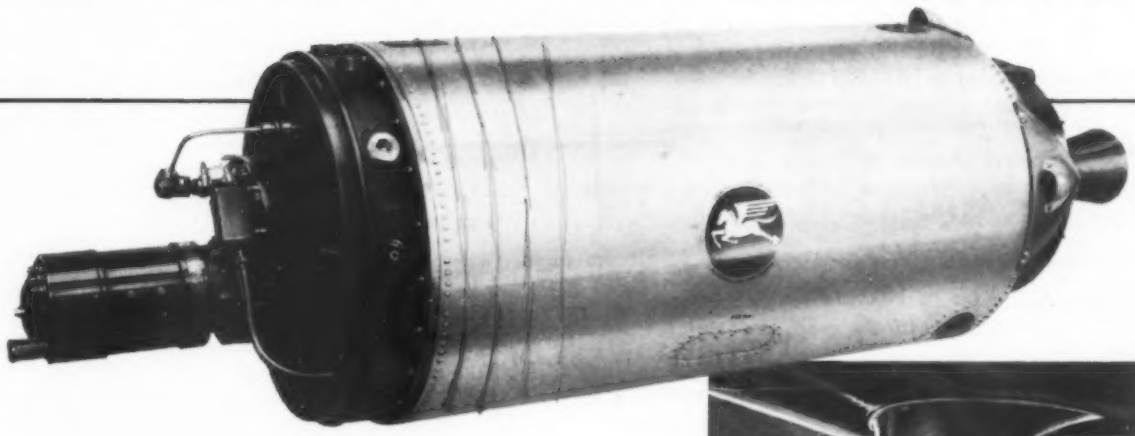

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Another example of a Fairchild design which met difficult and exacting specifications, the J-44 typifies the creative engineering ability of the Fairchild Engine Division.

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Rebirth of the Luftwaffe: Europe Watches
German interceptors could pare down Red air superiority 13

Strikes May Foreshadow Industry Shutdown
Lockheed and Douglas walkouts, involving 41,000 workers, are seen as results of rivalry between IAM and UAW 15

'Off-Shore' Buying to Hit $400 Million in '53
Figure for aircraft program includes $225 million from U.S.; first complete aircraft will be bought next year 18

Speed Control: Answer to Traffic Jams?
Pilot group offers plan for crowded air terminals 21

First Details on New Fokker Transport 22

Lockheed Shifts Top Brass for Planning 26

What's Ahead for Backward-Facing Seats?
Record in crashes looks good, but new questions arise ... 31

Consolidation: Whose Meat, Whose Poison?
Opinions sharply split on virtues of combining 39

THIS MADE NEWS: HOK-1 helicopter . . . Action on Doolittle Report . . . Plan Newark reopening . . . Baker inspects Comets . . . Surface radar at N. Y. . . . Russians test new bomber, p. 17 . . . Packaged units cut repair costs . . . Plastic seat covers . . . Fuel line repairs, p. 35 . . . Revenues will near $2 billion: Hildred, p. 38 . . . Tigers get private money; drop RFC plans . . .Tourist traffic heavy . . . Barringer's new post . . . BOAC profit for '51, p. 42 . . . Discount fight dropped . . . New information rules . . . Floor for mail rate . . . Lake Central delay denied by CAB, p. 45 . . . First flights due for new aircraft . . . Cessna sales up . . . Canadair subcontract . . . Convair 340 sales, p. 49 . . . Eight-bladed Turbolectric prop . . . Allison & Aeroproducts merged . . . Ford to build new Westinghouse jet, p. 50 . . . P&W engine deliveries return to normal . . . McDonnell F-101 escort fighters ordered, p. 51 . . . Vickers Valiant; tomorow's transport? . . . BOAC chairman looks into future . . . Germans, S. Africans start airline . . . Viscount production, p. 52 . . .WIS may buy Lake Central, p. 20.

AMONG THE DEPARTMENTS: Letters, p. 8 . . . Editorials, p. 10 . . . Military News, p. 13 . . . Extra Section, p. 34 . . . Maintenance Bulletin Board, p. 35 . . . New Products, p. 36 . . . Statistics, p. 38 . . . Commentary, p. 42 . . . CAB News, p. 43 . . . People, p. 44 . . . International Report, p. 52 . . . Advertiser's Index, p. 53 . . . Classified Ads, p. 53 . . . Photo Credits, p. 53 . . . En Route, p. 54.

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Official Airline Guide: Monthly publication of airline schedules and fares. Subscriptions: U. S. A. and countries belonging to the Pan American Postal Union, including Spain and the Philippines, $11.00 one year. Canada, $11.50. All other countries, $12.50. Published from editorial offices at 139 North Clark St., Chicago 2, Ill. Central 6-5804. Robert Parrish, managing editor.

American Aviation Traffic News (incorporating Air Tariff Reports): Published daily except Saturdays, Sundays and holidays. Subscriptions: $150 a year. Preble Staver, managing editor.

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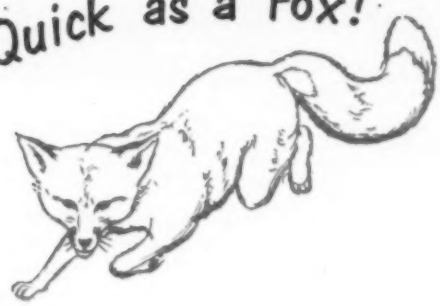

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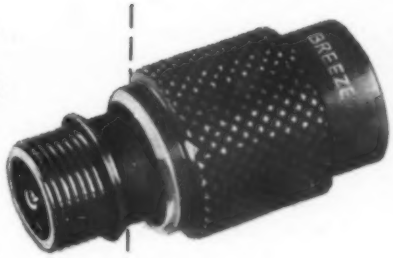

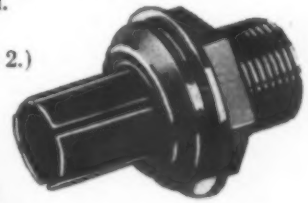

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Meet Your Editors

Staver

MEET PREBLE STAVER recently promoted to the post of Legislative Editor for AMERICAN AVIATION. The "Preble" comes from being a descendant of "Commodore Preble," one of the fathers of the United States Navy when this country was busy fighting off the Barbary Pirates. Maybe that's why everyone around here refers to Preble as just plain Pete.

Pete's business career started right after his graduation from the University of Pennsylvania (B.S. in economics as a transportation major). He started out as a Pullman ticket agent but found that mode of travel a mite slow for his taste. He was about to get into the aviation industry when the war came along and Pete served as a Marine lieutenant with many months of active service. When it was over, Pete joined Eastern Air Lines as a passenger service representative in order to gain sound air transportation know-how.

The next step, as Pete logically planned it, was working for Air Cargo, Inc., a division of the Air Transport Association of America. Pete worked as assistant director of tariffs and publications for some time. This experience served him in good stead, for the next step Pete decided to take . . . as he had originally planned it . . . was with AMERICAN AVIATION.

He joined us just two years ago this month as the busy Rates and Tariffs Editor. Pete has been managing editor of our *Traffic News* and also editor of *Air Travel News* section of the monthly *Official Airline Guide*.

Personally, Pete's as keen as his writing. He's a lean and lanky, six-foot-two Down Easter who still retains his Maine twang. His specialty, besides having flaming red hair, is high scoring as a leader in AMERICAN AVIATION's duckpin bowling team. The Staver family lives in nearby Alexandria, Virginia—Pete, wife Isabell, daughter Leslie, age 5, and son Whitney, now four years old.

• • •

At the very outset of his career, Pete Staver knew how useful AMERICAN AVIATION could be in keeping him well posted on the important happenings throughout the industry . . . and in rounding out his background.

Perhaps you know of someone starting out in the air transportation field . . . in the military air services . . . in aviation engineering, design, or manufacturing . . . at an airport . . . who would benefit (as Pete did when he started) . . . from AMERICAN AVIATION's services. If so, we'd like to suggest a gift subscription. The rates are given on the table of contents page at the front. . . . Service will begin promptly, and if you wish we will notify the recipient of your gift with a personal note.

When & Where

Sept. 30-Oct. 2—Aircraft Spark Plug & Ignition Conference, Champion Spark Plug Company, Toledo, Ohio.

Oct. 1-4—Society of Automotive Engineers, National Aeronautic Meeting, Aircraft Engineering Display and Aircraft Production Forum, Statler Hotel, Los Angeles.

Oct. 3-4—Air Reserve Association, National Convention, Roosevelt Hotel, Los Angeles.

Oct. 6—Aero Club of S. California, Annual Banquet, Roosevelt Hotel, Los Angeles.

Oct. 9-10—Airport Management & Operations Conference, Oklahoma University, Norman, Okla.

Oct. 10—Third Noise Abatement Symposium, Armour Research Foundation of Illinois Inst. of Technology, Chicago.

Oct. 10-11—American Society of Tool Engineers, Int'l Area Meeting, Statler Hotel, Buffalo, N. Y.

Oct. 2-3—Corporation Aircraft Owners Assn., Blackstone Hotel, Chicago.

Oct. 7-8—Aircraft Electrical Society, 9th Annual Display Mtg., Pan Pacific Auditorium, Los Angeles.

Oct. 11-18—4th Annual All-Texas Air Tour, info. from Texas Aeronautics Commission, Austin.

Oct. 14-15—Airport Development & Operation Conference, Hotel Onondaga, Syracuse, N. Y., sponsored by N. Y. State Dept. of Commerce.

Oct. 20-24—American Society of Travel Agents, 22nd Annual Convention, Miami.

Oct. 27-30—Air Transport Association, Purchasing Committee, Drake Hotel, Chicago.

Oct. 28-29—Transport Aircraft Hydraulics System Conference, sponsored by Vickers, Inc., Hotel Park Sheraton, Detroit.

Oct. 28-30—American Institute of Electrical Engineers, Middle Eastern District, Hotel Commodore Perry, Toledo, Ohio, and semi-annual meeting of Air Transportation Committee of AIEE.

Nov. 6-7—Society of Automotive Engineers, National Fuels & Lubricants Meeting, The Mayo, Tulsa, Okla.

International

Oct. 21—IATA Traffic Conferences, Nice.

Oct. 21—ICAO, Aerodromes, Air Routes and Ground Aids Division (AGA), Montreal.

'Flying Carry-All' for the Army Field Forces — Increasing numbers of Sikorsky H-19's are coming off production lines in the traditional olive-drab colors of the U. S. Army. They will be vital components of the Army's newly organized Helicopter Transport Companies which have the important assignment of giving logistic and tactical support for the ground forces.

In Army service, helicopters will be used for personnel and cargo transport, observation and reconnaissance, wire laying, courier service, evacuation of the wounded and all the other duties for which they have proved so indispensable in Korea.

Adoption of the Sikorsky H-19 by the Army has made its use unanimous with America's military services. Other modifications of this basic type helicopter have already been established as standard and important items of equipment with the Air Force, the Navy, the Marine Corps and the Coast Guard.

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Letters

Letters should be addressed to The Editor, American Aviation Magazine, 1025 Vermont Ave., N.W., Washington 5, D. C. Anonymous letters will not be printed, but names will be withheld upon request.

THEY'VE MET THE EDITOR

To the Editor:

All of us here at Western Air Lines read with very special interest the "Meet Your Editors" column devoted to AMERICAN AVIATION'S West Coast editor, Fred Hunter.

The details of Fred's background and training must have been very revealing to all those in air transportation and aircraft manufacturing who have worked with him for so many years, for they certainly point up the competence and character that are enabling Fred Hunter to make so fine and consistent a contribution to the progress of aviation in the West.

BERT D. LYNN
Dir.-Advertising & Pub. Relations
Western Air Lines
Los Angeles 45, Calif.

•

BACK SEAT IN JETS

To the Editor:

Just a line to let you know how much I appreciated your revealing editorial describing the back seat that the United States has taken in the developmen of jet transport aircraft. I should like to add two items in his connection:

• I have been informed from reliable sources that the de Havilland Comet jet transport was developed by the de Havilland Company without one penny of financial assistance from either the British Government or from any Marshall Plan funds from the United States.

I mention this fact here because the indifference of the American aircraft manufacturing industry to developing a jet transport has too long been summarized by the shrug and comment: "Of course, if we could get a little of the money the Marshall Plan has been sending to England, we could develop a Comet too!"

• The fact that America is definitely second in the race to develop, build, and fly jet transport aircraft should not be as much of a shock as it apparently is to the American aviation industry or the American public. I should like to quote from an address delivered by the Honorable Joseph J. O'Connell, Jr., a former Chairman of the Civil Aeronautics Board, before the Los Angeles Chamber of Commerce, on January 23, 1950, wherein he stated:

"A year and a half ago—June, 1948—when as the newly inducted Chairman of CAB, I toured a number of manufacturing plants and airline installations, one of the questions which I asked was how soon jets might be feasible for commercial operations.

"I was new enough to the business and just naive enough to believe that since jets were being built for and flown by the Military, they might be adapted to commercial operations in the relatively near future. The response that I got almost universally was that jets were at least 10 years away. Exactly 18 months later the British and the Canadians both test flew large jet transports and are now peddling them to the airlines of the world!

"We might ponder the question of how American aviation got caught flatfooted in the development of jet transports, but of greater importance is the question of what we must do to catch up with our friends to the north and across the ocean. The problems are enormous and sooner or later they will affect, in one way or another, virtually everyone in this room, whether he be designer, manufacturer, airline official, airport operator, or pay passenger."

JOHN T. HENDERSON
Alexandria, Virginia

•

AOPA PROTESTS

To the Editor:

We wish to most vigorously protest the recently "adopted" amendment in landing fee charges applicable at the Boise City Airport, based upon the report of same appearing on page 49 of the September 15 issue of the magazine, AMERICAN AVIATION.

Following AOPA's traditional role in championing the cause of non-airline flying, we protest most vigorously the $50.00 Flying Saucer landing fee which is to be applied for "non-scheduled flights." We note with strong feeling that all scheduled landings of flying saucers are to be permitted use of the airport rate free.

We also feel that the innovation of a "hovering" fee is entirely illegal, unconstitutional, and unsafe for pilots of flying saucers whom you must really admit may be unacquainted with the airports of intended landing and who, therefore, in the interest of flying safety, should not be penalized for their taking a good look in hovering flight before they initiate landing procedures.

While AOPA pilots, for a period of several years, have reported in some detail upon the flight activities of saucer pilots, this organization has not yet completed its customary bilateral agreements with the flying saucer pilots, such as exists between AOPA and the pilots' organizations of 34 other countries throughout the world. Appropriate steps will be taken, if the circumstances permit, to complete these arrangements.

Notwithstanding the foregoing, AOPA feels that its role as champion of the rights and privileges of general aviation, both nationally and internationally, amply justify the action taken in this letter in protesting the discriminating application of saucer landing fees and we request that immediate action be taken to remedy this situation and that we be advised further regarding these matters.

J. B. HARTRANFT, JR.
Aircraft Owners and Pilots Association
Washington, D. C.

Books

THE SOCIAL IMPACT OF THE WARSAW CONVENTION, *by Harold J. Sherman. 156 pages. Published by Exposition Press Inc., 386 Fourth Avenue, N. Y. 16, N. Y.*

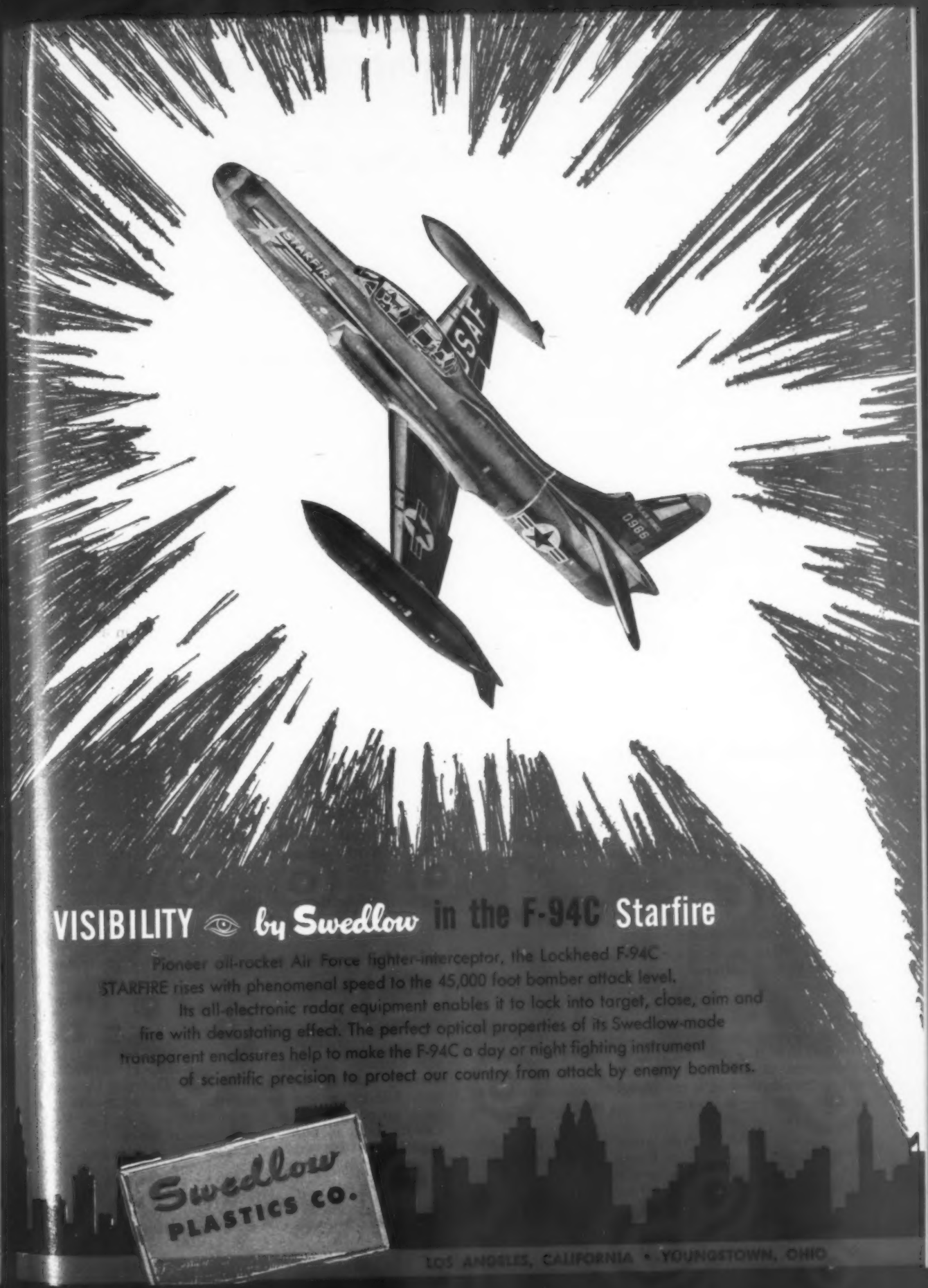
On February 22, 1943, Pan American World Airways' "Yankee Clipper" crashed and sank in the Tagus River, at Lisbon, Portugal. Among the passengers killed was Arthur Albertus Lee, a businessman from Westchester County, New York. When his widow and next of kin sued Pan American for several hundred thousand dollars, charging that Lee's death had been caused by the airline's negligence (which was not disputed by Pan Am, according to the author) they discovered that all they could hope to obtain in damages was $8,291.87.

How this came to be and why it should not be is the theme of "The Social Impact of the Warsaw Convention." For it was the Warsaw Convention of International Transportation by Air of 1929 (which the United States joined in 1934) that set a limit of 125,000 French gold francs on the damages payable by international airlines for injury to passengers.

Sherman, who represented the Lees during their court fight, traces the course of that legal battle and argues that the Convention strikes a blow at civil liberties, since it denies the victim or his family the right to have the damages decided by a jury trial as guaranteed by the Bill of Rights in the Seventh Amendment. The court's decision should therefore be reversed, Sherman argues, since the article in the Warsaw Convention on which it was based is unconstitutional.

The argument as presented in this book is, on the whole, clear enough for even the non-legal reader. It is also enlivened by occasional bursts of rhetoric which, if they do nothing to advance the logic of the case, at least serve to display Sherman's linguistic virtuosity.

Urging that the courts need not consider themselves bound by precedents unfavorable to his side, Sherman advises them: "It is not incumbent upon any court of law to contribute, by slavish or obeisant conformity, to the petrification of judicial indiscretion and error and the befogging or destruction of the beautiful grandeur and consonance of our jurisprudence."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Editorial

One Did and One Didn't

WE'LL lay you a bet that you've heard of Tehachapi, California, but we'll bet you've never heard of Arvin, a slightly larger neighboring town.

Both towns were severely damaged in the July earthquake. You read a lot about Tehachapi and nothing about Arvin for just one reason—Tehachapi has an airport and Arvin doesn't have.

by W. W. P.

Cecil C. Meadows, superintendent of airports for Kern County, in which the earthquake centered, wrote a very keen report on the quake and its destruction in a bulletin to members of the American Association of Airport Executives, of which he is president. The report of what happened was interesting enough, but his conclusions were much more so.

Emergency workers were flown immediately into Tehachapi. Radio communications were set up. Tehachapi was the center of news and relief attention. But it was two or three days before Arvin was given attention, and yet the damage to irrigation walls and pipe lines and crops was greater there than at Tehachapi. The answer: no airport. It was as fine an illustration of the vital importance of airports as one can find anywhere.

Pittsburgh Tragedy

We've had our first look at Pittsburgh's new multi-million-dollar airport terminal and we regret to report that we were vastly disappointed. In size, cost, area, and many such desirable features as air-conditioning and a hotel, Pittsburgh's terminal is very impressive. But as a functional terminal adapted to the needs of air transportation it missed the mark by a wide margin. It will be very difficult to make it self-sustaining.

For more years than it wishes to remember, Pittsburgh had suffered with a tiny, over-crowded, unattractive terminal built for the early days of the airplane. So it went all-out with a new structure on a new airport. The cost was terrific. Yet the planning was so short-sighted that passengers will still be crowded into tiny waiting rooms, the accessibility to concessions is difficult, and public and passengers will be intermixed in a completely inadequate ticket counter area. It is tragic that so much money has gone for so few results.

We are awaiting with great interest the opening early next year of Fort Worth International Airport, which, from what we have seen to date, will be the finest functionally-designed terminal in the world. We also are awaiting with interest the proposed new Cleveland terminal which ought to be of advanced design.

Poorly-designed terminals will be a burden for both taxpayers and airlines.

It's A Pleasure

It's time for a few bouquets based on the news of the past few months:

POLITICS: Tremendous credit goes to Stuart G. Tipton, general counsel of the Air Transport Association, for initiating visits with both General Eisenhower and Governor Stevenson to acquaint them with air transport problems. It's never been done before in advance of elections. Tipton asked for no commitments—only the chance to explain. He was accompanied on both visits by Robert F. Six, president of Continental Air Lines.

HONOR: The first civilian in twenty years to receive the Distinguished Flying Cross came to Washington recently to get his just due. He was Col. Roscoe Turner, the veteran racing and barnstorming pilot who is now 56, who was honored for his "contributions to the advancement of aerial flight." Congratulations are in order.

FINANCE: C. E. Woolman started Delta Air Lines as a crop dusting outfit in Louisiana many years ago. Just lately a group of southern banks extended a $20 million credit to Delta, the largest such deal ever consummated in the South. A new stock issue was over-subscribed about the same time. It must have made Mr. Woolman feel mighty good and mighty proud to have built up an airline strong enough to warrant unprecedented confidence by the bankers. It is also testimony to the economic stability of well-run airlines.

CREDIT: Some months ago we lambasted on this page Dr. J. Parker Van Zandt, in charge of civil aviation matters in the office of the Under Secretary of the Air Force. We thought Dr. Van Zandt was unduly messing up the spare parts situation for the airlines.

Just recently Dr. Van Zandt was the prime mover in doing the airlines a good turn by certifying the defense usefulness of air transport airplanes, thereby making it possible for the Defense Production Administration to approve rapid write-offs on new purchases. It is a pleasure to give Dr. Van Zandt (who is now on six months leave from the Air Force) his due credit for this important aid, especially in view of our having lambasted him previously.

. . . WAYNE W. PARRISH.

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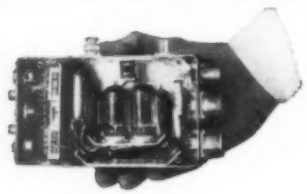

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Rebirth of the Luftwaffe: Europe Watches

WEISBADEN, GERMANY—There is one strong impression that an aviation observer here gets from talking to officials of the U. S. Air Forces in Europe: that Germany, our erstwhile enemy, will play an important part in the defense of the West against Russia.

There is, of course, nothing being said officially about plans to utilize the German potential, if, indeed, there are such plans formulated. But there is a lot of conversation about how important that potential could be and one gets the distinct impression that USAFE would like to take the Germans into the North Atlantic Treaty Organization as full partners.

Such partnership would consist, aviation-wise, of rebuilding the German Luftwaffe with American help, and extending the off-shore procurement program to include German aircraft manufacturers. As for the latter item, German industry, including some automobile manufacturers, is reportedly already pressing for such recognition.

Such a program would almost certainly run into obstacles on the home front, from persons who are unable to forget that the Germans, permitted to rebuild after World War I, promptly percipitated the world into a second major war. It would also make wonderful material for a headline-seeking Congressman.

But sound observers here think it would be a good idea to include the Germans in our defense plans. They are convinced that the West Zone Germans are now definitely "on our side" and that they would make good allies. They point to German initiative and enterprise which has rebuilt a shattered country into what is today probably the most progressive on the continent.

This initiative they contrast with the vacillating, shrug-shoulder attitude of some of our allies, which has proved a stumbling block in building up an efficient NATO defense organization.

The strategic position of western Germany is also a factor in the argument for its inclusion in the program. Russian jets based on or near the East German border can range to the Rhine in 10 minutes or less. The Air Force's only two troop carrier units on the continent are based at Frankfurt, a scant eight minutes jet time from the Red border. The headquarters of USAFE is actually located nearer Russian territory than a defending armored division back across the Rhine. The only American jets based in Germany are Republic F-84's, primarily ground support aircraft and admittedly not a match for the MiG-15 in aerial combat.

A German ground army, backed by an adequate air force, could buy valuable time in defending this "hot" zone. The air assignment which informed observers here would give the Germans would be strictly defensive—a strong interceptor force to threaten the local superiority which the Russians would certainly have if war broke out today.

Are the Germans willing to undertake such an assignment? Our sources believe they would be. First, it is their own country they would be defending, and they still have a strong nationalistic pride. Secondly, they are willing to grasp at anything to better their economic position, and rebuilding their defense industry would certainly contribute to that.

As for rebuilding the Luftwaffe, there would probably be no shortage of recruits. Germany is full of wartime pilots and airmen whose wings were shorn by the occupation and who would like to become fly-boys again.

The aircraft industry took a pretty good pasting during World War II, but it could be rebuilt. In the interim, there are automobile plants operating which could be turned to plane production.

Taking the Germans into the NATO team is not something that will happen tomorrow; any such plan, if it has reached the stage where it could be called a plan, would probably have to await conclusion of a peace treaty. But at least it's in the wind.

How Ready Is NATO?

The discussion of the vulnerability of West Germany brings to mind another question: Is the NATO air organization in any shape today to fight a war?

Even the most ardent NATO enthusiast probably would not call it good shape. But each month sees improvement.

This improvement does not come easily. Building a NATO force has proved more of a problem than was expected due to barriers of language, custom, differing psychologies of warfare, security restrictions between member countries, and a variety of other obstacles.

But U. S. members of the NATO structure are beginning to feel that their efforts are proving productive. By the end of this year, they think, the NATO air organization will have developed, if not into a formidable force, at least into a competent first line of air defense.

Goal for the end of the year is 4,000 planes. It will not be met. But the actual strength attained will not be far enough short of the goal to cause concern and the 4,000-plane strength is expected to be reached shortly after the first of the year. And the strength will be increased in 1953 and again in 1954.

The general opinion in the U. S. has been that the USAF is "carrying" the NATO air organization. Such, however, is not the case. Of the 4,000 planes, only about 700 will be American. Actually, the British will have more aircraft in the 4,000-plane structure than will the USAF. The other countries are carrying a proportionate load, although it is true that some of the planes to be operated by the other countries will be or have been provided by the U. S.

. . . JAMES J. HAGGERTY, JR.

B.F.Goodrich

Molded lips that seal tight come open with a zip

Seal that saves muscle zips off to save time (1). In the Boeing B-47, seals were needed between elevator and stabilizer, rudder and stabilizer, and aileron and wing to make manual control easier. But with ordinary seals, hundreds of screws would have to be removed every time a control surface had to be taken off. B. F. Goodrich suggested Pressure Sealing Zippers for the flaps. Their molded rubber lips successfully prevented air flow through the hinge area. And mechanics unzip the flaps in seconds.

It lets men in—keeps fumes out (2). Keeping engine fumes out of a jet's cockpit called for a partition between cockpit and fuselage. But with a standard metal partition, mechanics would have to fuss with bolts or screws to get in for maintenance. BFG engineers' answer—a fume curtain sealed with a Pressure Sealing Zipper. The zipper's molded rubber lips provide a 100% effective seal. The curtain can be zipped open in seconds.

Shuts up torrent of hot air (3). Designers wanted to make the hot air duct in the Douglas C-124 in 6-foot sections.

They needed a strong, flexible coupling that would permit easy removal of the sections. B. F. Goodrich Pressure Sealing Zippers proved ideal. Their molded lips provide a 100% seal. They resist heat and damage, speed maintenance.

Pressure Sealing Zippers fit irregular shapes. Can be cemented. Save space and weight. Other B. F. Goodrich products for aviation include tires, wheels and brakes; heated rubber; De-Icers; Avtrim; inflatable seals; fuel cells; Plastilock adhesives; Rivnuts; accessories. *The B. F. Goodrich Company, Aeronautical Division, Akron, Ohio.*

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VOLUME 16, NO. 9

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Donald Douglas, Sr.
Douglas

Cyrus Ching
Mediation Service

Strikes May Foreshadow Industry Shutdown

Lockheed and Douglas walkouts, involving 41,000 workers, seen due to rivalry between IAM and UAW.

By Robert M. Loebelson

THE STRIKE by 25,000 members of the AFL-Machinists union against Lockheed Aircraft Corp.'s main plant at Burbank, Calif., and six satellite Lockheed installations on the West Coast and the similar action of 16,000 other IAM workers against Douglas Aircraft Co.'s El Segundo plant once again focuses attention on how quickly a decision by labor leaders can shut down production for the defense effort.

The two walkouts may be a prelude to a widespread shutdown of the aircraft industry. At the International Association of Machinists convention in Kansas City, one of the union's general vice presidents, Roy M. Brown, declared, "If it comes to a final showdown, it might reach a point where all aircraft manufacturing should be jointly shut down to force bargaining procedure which would permit us to deal with the people who are making the decisions. Joint strike action would only be a last resort."

Brown accused Lockheed of avoiding "bargaining in good faith" at the instigation of the Aircraft Industries Association. He claimed AIA's member companies "are acting in concert on wages, working conditions, and other bargaining points, including the union shop."

But what is happening while the strikes go on? What does the IAM hope to gain? What brought about the walkouts in the first place? What are the issues holding up early settlements?

Among other things, the Burbank and El Segundo curtailments are:

Delayed Deliveries

• **Delaying deliveries** to the Air Force of the Lockheed T-33 two-seat jet trainer and the F-94 jet interceptor.

• **Delaying deliveries** to the Navy of the Lockheed P2V Neptune patrol bomber and the R7V transport, the Douglas AD-4, 5, and 6 Skyraiders, the F3D-2 Skyknight, the F4D-1 delta-wing Skyray, the A2D-1 turboprop Skyshark, and the A3D-1 carrier light jet bomber.

• **Stalling deliveries** of the Lockheed Super Constellation to various commercial airlines.

• **Depriving 41,000 workers** of their weekly paychecks, forcing their families to live on savings. If the strikes continue for any extended period, it will mean hardships in many cases because strikers are not entitled to unemployment compensation.

• **Reducing Lockheed's** and Douglas's already low profits. Many contractors and suppliers will also find themselves with reduced earnings if the walkouts continue and the two companies have to suspend deliveries of raw materials and components.

The IAM would deny it but the real reason for the two strikes is the old rivalry between it and the CIO-Autoworkers headed by Walter P. Reuther. It dates back a few months to negotiations between North American Aviation and the UAW. After weeks of dispute, both NAA and the Autoworkers agreed to the appointment of an arbitration panel by President Truman.

This panel, headed by David L. Cole, the subsequently named director of the Federal Mediation and Conciliation Service, recommended a 10-cent-an-hour wage hike. This was approved by the Wage Stabilization Board, making NAA's top pay rate $2.31 an hour plus three cents more under the cost-of-living clause.

While the arbitration sessions were under way, Lockheed, which had been offering two cents an hour (claiming that was all it could grant under WSB regulations), during Washington mediation talks also indicated willingness to pay whatever the panel and WSB decided on. But John Snider, head of the IAM local at Burbank, turned this offer down.

Just before the strike at Lockheed began and WSB approval of the NAA rates was given, Lockheed vice president Cyril Chappellet firmed up the offer, making it seven cents plus two cents cost-of-living. Thus Lockheed's current $2.24 rate for Grade I employes would increase to a $2.31 base and $2.33 including cost-of-living allowances.

The IAM local, although reducing its original 10½% demand to 14 cents

an hour plus two cents cost-of-living, held firm to the latter demand because that would give Lockheed's Machinists a base of $2.38 an hour, or seven cents more than the UAW got at NAA.

This, the IAM felt, would enable it to keep its membership from grumbling about the fact that the UAW set the wage pattern and the IAM lagged behind. The Machinists headquarters in Washington has been getting concerned over such complaints and the possible loss of membership to the UAW.

Walkouts

A situation similar to that at Lockheed held true at two Douglas plants which were negotiating with the IAM. Here again the IAM locals sought a $2.38 base and Douglas countered with a five cent boost from $2.26 to $2.31 as the base plus two cents escalator. Union leaders spurned the Douglas offer and recommended walkouts at both Santa Monica and El Segundo.

At an El Segundo mass meeting, the membership agreed with the recommendation and voted to walk out. But Santa Monica's IAM workers, by a four-to-one margin, rebuffed the suggestion and voted to accept the Douglas offer.

To counteract this situation El Segundo strikers appeared in front of the Santa Monica plant shortly after their own walkout started in a sort of secondary picketing. Some Machinists at Santa Monica refused to go through the picket lines and absenteeism increased slightly but not enough to interfere with production of commercial DC-6's and 7's, C-118A's for the Air Force, and R6D's for the Navy.

Company president Donald W. Douglas immediately wired Roy Brown at Kansas City asking him to order the picketing at Santa Monica discontinued and instruct union representatives to concentrate on completion of the contract there. But the IAM was still trying to figure out a way to get Santa Monica employes to strike.

CIO Raiding?

The Machinists have also been confronted with trouble at another Lockheed plant—the B-47 installation at Marietta, Georgia. Although Lockheed had recognized the IAM as the bargaining agent there when it took over the plant, a new CIO union, calling itself the United Lockheed Aircraft Workers Local 1784, started signing up members and asked the National Labor Relations Board for a representation election.

The union, according to IAM officials, was organized by CIO vice president Allan Haywood, and has nothing to do with UAW. They point out that the UAW-IAM no-raiding agreement would be violated if Reuther had okayed the establishment of the new union. But it is hard to believe that Haywood would have taken such a step if Reuther had voiced strong objections.

At any rate, NLRB has ordered an election among all production workers at Marietta, giving them the choice of Haywood's union, the IAM, or no union at all. An IAM loss might also bring about similar Haywood unions at other plants where the Machinists currently have bargaining rights. If this isn't raiding by Reuther, it is certainly raiding by the CIO, which is almost the same.

If the walkouts continue at Lockheed and Douglas for any extended period there is a good possibility another major aircraft facility will be shut down —the Consolidated Vultee plant at San Diego, where Convair is building T-29 navigation trainers, F-102 jet interceptors, and C-131 transports for the USAF, R3Y turboprop flying boats and F2Y-1 seaplane interceptors for the Navy, and Convair-Liners for commercial airlines.

The issues at Convair are basically the same as those at the Los Angeles area plants. Negotiations have been comparatively quiet pending a decision at the Douglas and Lockheed plants, but the IAM may decide to do what Brown threatened—close down a good part of the industry to attract attention from the Government in Washington and obtain the wage hikes it wants through some fact-finding or arbitration board.

Ching Resigns

Washington is not unaware of the situation. Since the walkouts began Federal mediator Harry Malcolm in Los Angeles has been trying to get the parties together. His boss in Washington, Cyrus S. Ching, also has been involved in the disputes. But Ching submitted his resignation as chief of the Mediation and Conciliation Service shortly after the strikes started and President Truman named Cole, who helped set the $2.31 pattern in the NAA case, to succeed him. This meant that Malcom, in trying to mediate, was handicapped slightly by having as his future chief a man who had previously decided that $2.31 plus cost-of-living allowances was a satisfactory top in the aircraft industry on the West Coast at present. Ching, however, is planning to stay on the job until the end of the month and is still involved in the negotiations.

Other departments in Washington are also concerned. Defense Secretary Robert A. Lovett declared the two shutdowns were having a "very serious" effect on the war effort and asked the new Defense Mobilizer, Henry H. Fowler, to see what he could do about getting the 41,000 aircraft workers back on the job and the strikes settled. Fowler, however, is temporarily leaving the situation in the hands of the mediators.

Two Reasons

There are two related reasons why the Government has not cracked down as yet—President Truman's avowed friendliness toward organized labor and the fact that IAM president Al J. Hayes has been working very closely with Assistant Defense Secretary Anna Rosenberg on manpower problems. Mr. Truman, incidentally, has the legal right to seize the plants under the Selective Service Law but is not expected to do so unless the strikes are prolonged.

There is a good possibility that they will continue even if some agreement can be reached on wages, either through direct negotiation or through the findings of some Government board. The issue is the union shop, which the Machinists are insisting that Douglas, Lockheed, and Convair grant. All three companies have been firm in insisting they will not capitulate on the issue of compulsory union membership.

On the Cover: Backlog

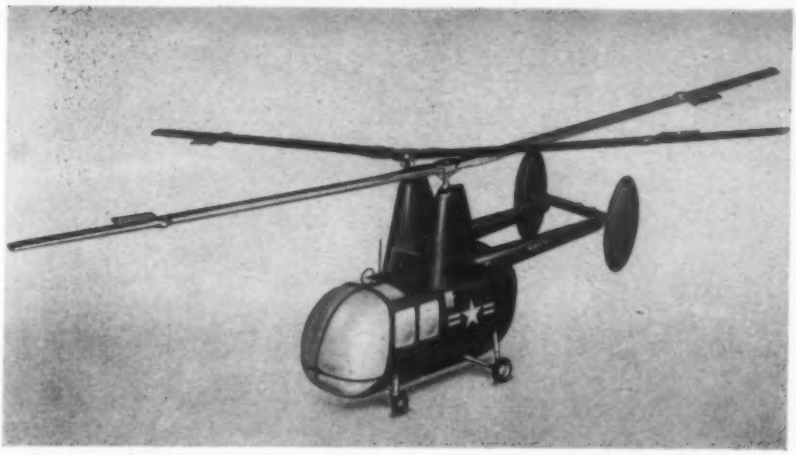
WHEN the 1952 fiscal year ended last June 30, America's aviation industry had unfilled orders totaling $14,507,000,000 of which $400,000,000 was duplication, orders being reported by both prime airframe contractors and their subcontractors. In other words, actual backlog on that date was $14,107,000,000 as shown on cover, the highest since World War II. Figures shown on cover for various components of this total include duplications.

Airframe and parts producers had 63% of the $14.5 billion in duplicated orders. The contracts they had to fill for $9,145,000,000 were divided $8,274,000,000 for the armed services and $871 million for commercial customers.

Twenty-nine percent of the overall industry backlog was held by builders of aircraft engines and parts. Of their unfilled orders totalling $4,159,000,000, the military again had the largest chunk, $3,980,000,000 and other customers accounted for the remaining $179 million.

Manufacturers of propellers and prop parts, with 2% of the total, divided their $267 million backlog as $235 million for the armed forces and $32 million for other users.

The remaining 6%, i.e., $936 million in orders, was held by manufacturers of other aviation products and services.



HOK-1 helicopter, shown in model form above, was designed by Kaman Aircraft and will be produced by the firm for the Navy.

CAB Acts on Doolittle Recommendations

The Civil Aeronautics Board has assigned its Bureau of Safety Regulations and its General Counsel to implement nine recommendations and suggestions made by James Doolittle in the Report of the President's Airport Commission, following the receipt of a letter from President Truman telling the Board to begin putting the recommendations into immediate effect.

The Bureau of Safety Regulations is to be responsible for the following recommendation of the Doolittle Report:

• **Maintain positive air traffic control** regardless of weather in areas of high air traffic density by creating special regulations.

• **Review present cross-wind component limits** to establish more liberal cross-wind landing and take-off specifications for each type of transport.

• **Provide more flight crew training,** to include frequent drills in instrument and emergency procedures by using flight simulators wherever possible.

• **Study methods of standardizing** and simplifying equipment in cockpits.

• **Study the "fail-safe" theory of design** to minimize the effect of possible mechanical failures and work with airlines and manufacturers on the implementation of such designs.

• **Utilize recording instruments** in the airplane and on the ground to obtain as much information as possible on emergencies in flight.

It is up to the General Counsel to:

• **Clarify laws and regulations governing use of airspace** by defining the authority of Federal, state, and municipal governments in order to avoid conflict.

• **Amend the Civil Aeronautics Act to require certification** of airports necessary for interstate commerce and specify terms and conditions under which they will be operated.

• **Define the limits of navigable airspace** for glide path or take-off patterns at airports.

The two CAB sections are to begin immediately in their roles and they are to submit weekly progress reports to CAB Chairman Donald W. Nyrop.

Letters were also sent to the Secretary of Defense, Secretary of Commerce, and the Postmaster General who still have their programs under study.

Plan Newark Operations

An Air Transportation Association group of airline operations and sales executives met recently to discuss the large scale resumption of operations into Newark Airport, now set for the first of November.

The new ILS runway, designated 4-22, will be ready for operation on that date, and runway 6-24, which was involved in the accident series which led to the closing of the airport, will remain inactive.

Planned ceiling and visibility limitations for the new operation are 200 feet —½ mile IFR, 500 feet—1½ miles for ADF letdown, and 600 feet—1½ miles for circling.

Baker Inspects Comets

G. T. Baker, president of National Airlines, and Walter Sternberg, vice president-sales, visited England in September to inspect de Havilland Aircraft's Comet jet transports. Baker said he was interested in finding out exactly what the situation was regarding the various Comet models, adding, "If the time is right and the price is right, we're interested."

Baker stated that he did not want a "loss leader," but an airplane that will make a profit. He and Sternberg were to return to the U. S. later this month after the IATA meeting in Geneva.

Surface Radar for NY

First use of surface detection radar for the ground control of operational aircraft has been marked by its installation at Idlewild Airport, New York, for a six-month period. The installation at Idlewild was made at the request of the Port of New York Authority with the support of Air Navigation Development Board funds.

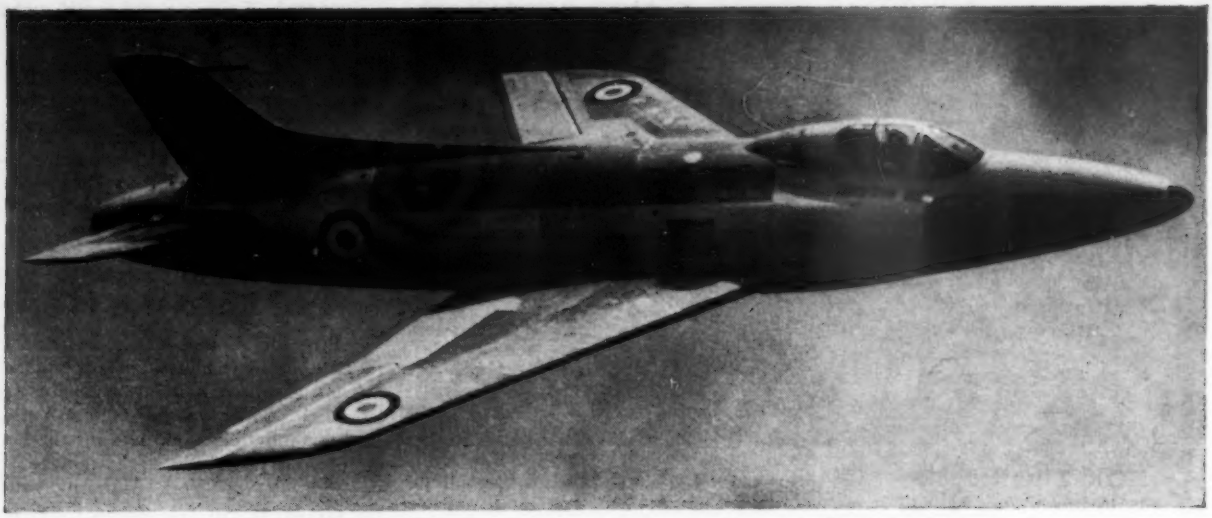
Past use of the equipment, which was manufactured for the USAF by Gilfillan Bros., Los Angeles, has been in evaluation tests by CAA's Technical Development & Evaluation Center staff during installations at Indianapolis and at Wold-Chamberlain Field, Minneapolis.

Russians Test New Medium Jet Bomber

A new Russian medium jet bomber in the Boeing B-47 Stratojet category is currently being tested at Dublistan airfield, south of Moscow. Although built in the Soviet Union, the new plane—designated Model 150—is more a German than a Russian aircraft, since it was designed by I. Baade, formerly top man of the Junkers design staff, and incorporates many of the features of the great German aircraft company's designs (notably the Ju 288).

The Model 150 has a swept wing and swept T-type tail unit. Two very powerful engines—slung from the wing in pods—power the new bomber. The prototype has the 10,000-pound-static-thrust Mikulin gas turbine but production aircraft will probably be equipped with the 11,500-pound Lulkov jet. Two pairs of take-off rockets are fitted to the prototype.

A reconnaissance version of the Model 150 is projected, and this plane will have a range (without auxiliary tanks) of 3,350 miles against the bomber's 2,250 miles. Service ceiling of both versions is 46,600 feet. At a gross weight of 117,500 pounds, the Model 150 can carry a bomb load of 17,500 pounds at a top speed of 600 mph. Length is 93½ feet; span, 98½ feet; wing loading, 84 pounds per square foot.



SUPERSONIC SWIFT. Coming from the same stable as the famed Spitfire, the Vickers Supermarine-Swift is an interceptor fighter in the supersonic class.

'Off-Shore' Buying Hits $400 Million in '53

U. S. to contribute $225 million of aircraft program total as first complete planes are bought for NATO.

By James J. Haggerty, Jr.

PARIS, FRANCE—One of the least understood aviation programs in being today is the Mutual Security Agency's off-shore procurement program, wherein American money is used to buy European products. It is a program which, on the surface, might appear foolhardy, because in effect it uses the money provided by the U. S. taxpayer to strengthen foreign competition to our own aircraft industry.

But officials here sincerely believe that the off-shore procurement program is one of the most effective weapons available in our attempt to build up the forces of the North Atlantic Treaty Organization against possible Russian aggression.

The program has a twofold objective, according to Fred Anderson, former USAF major general and now Special Representative, Europe, with the rank of Ambassador, who directs the military end of the MSA program.

First, it permits a more rapid build-up of the NATO defense organization by utilizing sources of production other than those in the U. S.

Second, it provides a market for products of European manufacture, thereby building up Europe's producibility against the day when it might be needed in full strength.

The latter is the more important point of the program. There is no question but that U. S. industry (and we shall confine it strictly to the aircraft industry, although the program also embraces guns, tanks, and other ground equipment) could supply the needs of the NATO forces. The American aircraft industry, for instance, is far from saturated and the additional backlog MSA could provide would undoubtedly be welcome.

Primary Aim

But that would do little to help Europe's producibility. The primary aim of off-shore procurement is to decrease the degree of dependence on the U. S., in short, as one official put it, "to hasten the day when we can get them off our backs." This, MSA officials feel, can be accomplished with a relatively small amount of money. It is a good investment, they believe, because the sooner the European countries are able to stand on their own feet, the sooner the U. S. will be able to cut its foreign aid commitments.

The off-shore procurement program does not contemplate, as some have thought, setting up European companies in business. The U. S. will provide no tools, no facilities, no materials. MSA simply offers a market for the product, providing incentive for increased production.

Here is how the program works: MSA will agree to buy a given number of planes of a certain type from a foreign manufacturer. These are to be "off-the-shelf" purchases, that is, MSA will buy the completed product and have nothing to do with its manufacture, except general supervision to insure that the desired quality of the product is maintained.

At the same time, the NATO country in which the planes are to be built must agree to purchase a proportionate number of the same type plane for use in its own air force. The MSA-purchased planes will be distributed to the NATO air forces which can best utilize them, but not to the U. S. Air Force, which will continue to be supplied by American manufacturers.

A corollary factor in the program is the fact that planes of European manufacture can be bought at much lower prices than similar types built in the U. S., due primarily to lower labor costs.

The fiscal year 1953 is the first year in which MSA will buy complete aircraft, although last year it spent $100,000,000 on procurement of spare parts for aircraft.

The 1953 program contemplates the expenditure of $400,000,000 to help revive the European aircraft industry. Of this amount the U. S. will contribute $225,000,000, the other NATO countries the remainder.

Here is the 1953 program, disclosed for the first time by MSA officials here:

• **Three plane types** will be built, two of the interceptor variety and the other a night fighter. The interceptors are the Vickers-Supermarine Swift a swept-wing, single-seat jet, and the Das-

sault M.D. 452 Mystere. The night fighter is the de Havilland Venom, a development of the well known Vampire.

• **MSA purchases** of the Swift will be made from Fokker Aircraft Co. of the Netherlands, which has a production capacity of 700 planes between now and 1956. The MSA program contemplates the purchase of about 500.

To handle Swift production, Fokker will phase out its current production of Gloster Meteors. Under the agreement, the Dutch government will also order Swifts from Fokker, for use by its own air force. Meanwhile, Vickers-Armstrongs Ltd. will continue production of the plane for the British Royal Air Force.

Belgium Involved

The Belgian company, Fabrique Nationale, which has been working in partnership with Fokker on the Meteor project, will phase out the Rolls-Royce Derwent engine it has been building for the Meteor and start production of Rolls-Royce Avon engines for the Swift.

• **The French company** Avions Marcel Dassault, which has been building the swept-wing jet Mystere for its own government, will go into production on a new, advanced version of the Mystere for MSA. The new model is the M.D. 452 Mark IV, which features a new wing and a different fuselage and which MSA officials believe will be definitely superior to the North American F-86 Sabre. The prototype model of the Mark IV is expected to fly this month.

Societe Nationale d'Etude de Construction de Moteurs d'Aviation (SNECMA), French engine manufacturer, will handle engine production for the Mystere project. The engine is a 7,400-pound-thrust Atar 101D.

Double-Barreled

• **Italy's Fiat Co.** will handle a double-barreled assignment—production of both the airframe and the engine of the de Havilland N.F. 3 Venom jet night fighter. The engine is the de Havilland Ghost. Fiat has been building Vampire fighters under license to de Havilland, and will start on the Venom project upon completion of the Vampire project, which is just winding up.

This is a revised program. An earlier program had included plans to produce the British English Electric Canberra light bomber on the continent, but this has been cancelled.

Thus, only five companies will handle the initial MSA production. These companies were selected because MSA and USAF officials feel that they are the only facilities in continental Europe currently qualified to handle production of complete engines and airframes and maintain American standards of manufacture. But the MSA dollar will be spread around among other European countries through subcontracts.

MYSTERE MYSTERY. This photo shows the present version of the Mystere. The "off-shore" version—the Mystere IV—will have a different wing and fuselage. No details have been disclosed.

What will be the impact of this off-shore procurement program on the American aircraft industry?

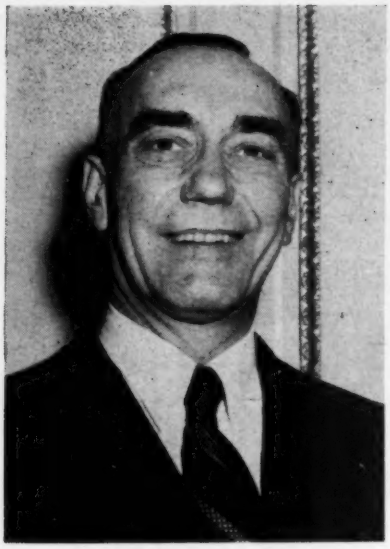
Ambassador Anderson and his staff do not feel that the MSA program will prove much of a detriment to U. S. manufacturers. Admittedly, it does divert some potential backlog, but, as Ambassador Anderson points out, it is "a drop in the bucket" compared with the procurement programs (see cover) of the U. S. Air Force and Navy.

But is it not true that in building up the producibility of these European companies MSA is also building up a threat to American post-emergency dominance in the aircraft field? Could not these foreign production facilities, built up at U. S. expense, divert their new-found productivity to commercial aircraft at some still indeterminate date when the war threat is behind us?

MSA officials concede that they might do just that, but they feel that the immediate urgency of setting up a new defense arsenal in Europe outweighs the possibility. Further, they add, American money alone won't do it. It will also take European initiative, and that is to be encouraged at the moment in the broader interests of NATO defense.

What about allowable profits for European industry, which traditionally has realized a larger profit margin than does the American aircraft industry (a meager 2.1% on sales last year)? Will the French, Dutch, Belgian, Italian, and other companies be allowed a profit of 10% or more on American contracts while the domestic industry is held to

VERSATILE VENOM. Although the off-shore program involves procurement of the two-place all-weather fighter version of the Venom, the Ghost-powered plane is also built as a single-seat fighter-bomber and as a carrier-based all-weather fighter with folding wings.



Ambassador W. H. Draper

merely 2%?

MSA officials had no direct answer to that one, but the general impression is that they will, since MSA will follow the contractual procedures of the country in which the plane or engine will be built. It is a hard question to answer, they say, because the contractual machinery has not yet been set up.

One other point: it may be noticed that there is no American engine or airframe in the off-shore program, while the equipment is predominantly British. This is apparently because the British had the vision to step into continental Europe with licensing agreements.

The MSA off-shore program definitely has no plans for purchase of American equipment built in American plants, since that would defeat the aim of European producibility. But, American equipment could be procured if it were being built in Europe under license. So there may be a market for an American manufacturer to step into one of the NATO countries with a license, particularly if the MSA program gets larger, as well it might.

That brings up a corollary point: would it mean anything in terms of dollars? Would the American manufacturer be allowed a royalty on MSA procurement of his product?

Again, officials here are vague; no one is quite sure. Generally, it is believed, a royalty will be allowed if the product was developed with private financing; otherwise, no.

The off-shore procurement program has not yet got up a full head of steam. No contracts for complete aircraft have yet been let and there is a lot of pre-program planning to be done. But MSA officials are confident of its success. In theory it is unquestionably sound, but the practicability remains to be seen.

For instance, can European countries handle aircraft production of the scope desired in the time required? And can they meet American quality standards? MSA thinks they can. If they can, the off-shore procurement program may prove to be one of the soundest moves the U. S. has made to strengthen the defenses of the West and to "get them off our backs."

Ambassador F. L. Anderson

Wisconsin Central to Buy Lake Central

IN SEVERAL bold moves which promised to strengthen its position in the local service airline industry, Wisconsin Central Airlines moved last week to:

• **Purchase controlling interest** in Lake Central Airlines, local service line with headquarters in Indianapolis:

• **Arrange to move its headquarters** from Madison, Wis., to the Twin Cities.

• **Possibly change its name** to North Central Airlines Inc., stockholders agreeing.

Biggest news was that WIS had signed an agreement (subject to CAB and stockholder's approval) to purchase the Weesner controlling interest in Lake Central, a deal that would add 2,500 daily route-miles to its system and give it five more DC-3's and one C-46.

The purchase includes 80,054 shares of outstanding common stock, held as follows: Nationwide Airlines Inc. (Michigan), 60,000; Frontier Airmotive Inc. 18,000; John V. Weesner, 2,000; and William W. Weesner, 54. Nationwide and Frontier are owned by the Weesner family.

The price that WIS will pay for the stock is to be net book value, after adjustment, upon determination of final mail rates for LCA. Agreement includes sales to WIS of all of Nationwide's rights in its applications for service between Detroit, Lansing, and the upper peninsula of Michigan.

It was also revealed this month that consummation of the WIS agreement with Purdue University, under which WIS is buying nine DC-3's from Purdue and the Purdue Research Foundation is furnishing funds to refinance the airline's obligations, is contingent upon:

• **Election of A. E. A. Mueller** to the presidency of the airline, succeeding Francis M. Higgins.

• **Appointment of Grove Webster** as a vice president and director of the airline. He was vice president and general manager of Mid-West Airlines.

• **Appointment of Dr. R. B. Stewart,** treasurer of Purdue Research Foundation, to the WIS executive committee and as a director. Webster and Stewart would assume directorates now held by Higgins and A. E. Schwandt.

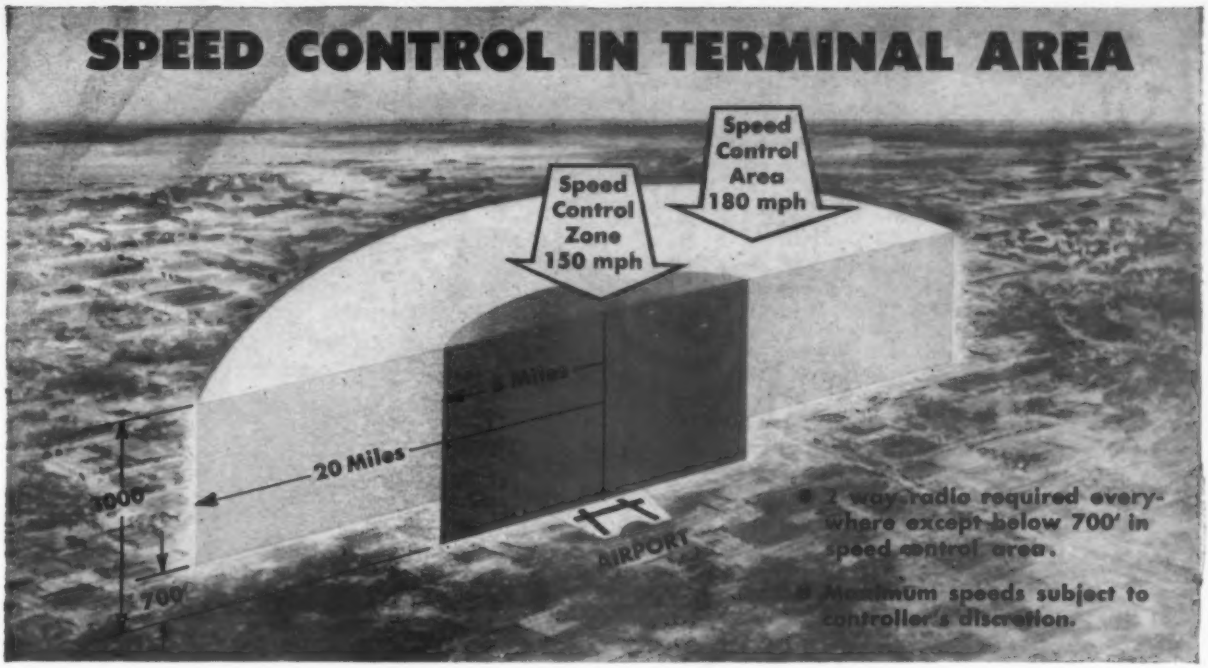
• **Appointment of Donald A. Duff** as executive vice president and general manager of WIS.

Under the agreement, Purdue is to loan WIS $190,000 to pay in full a secured note to Equitable Reserve Association, payment to start October 1, 1953. On the plane sale, WIS will execute a $90,000 note for each aircraft and a chattel mortgage on each aircraft.

WIS is also to use its best efforts to raise equity capital by sale of 90,851 shares of authorized but unissued common $1 par value stock at the best obtainable price with a minimum of $2.50, no later than February 28, 1953.

The Minneapolis-St. Paul Metropolitan Airports Commission offered the airline temporary facilities at Wold-Chamberlain provided it moves within four months, and will give it first call on any structures that become available within a year. If such structures do not become available, the Commission will spend $1,000,000 to build facilities, and has pledged a second $1,000,000 to expand these facilities. The second $1,000,000 is subject to requisition by WIS at any time within 90 days after renewal of the airline's certificate, which expires September 30, 1955.

The WIS move will involve 200 personnel and their families, the bulk of the aircraft fleet, and shop machinery and equipment. AF deadline for vacating Madison is October 1 but the airline will ask an extension.


SPEED CONTROL IN TERMINAL AREA
Speed Control Area 180 mph
Speed Control Zone 150 mph
5 Miles
20 Miles
3000'
700'
AIRPORT
• 2 way radio required everywhere except below 700' in speed control area.
• Maximum speeds subject to controller's discretion.

Speed Control: Answer to Traffic Jams?

Pilot group pushes two-way division of area surrounding crowded terminals as anti-collision measure.

AN AIR TRANSPORT Association committee of airline chief pilots has come up with a proposal for the control of VFR traffic in high density terminal areas and, for want of any other sure cure for the problem, indications are strong that CAA and CAB will put it into effect at least on a trial basis before the year runs out. The plan involves:

Moe

• **Speed control:** a 180-mph limit within a 20-mile radius of the congested airport and 150 mph within a zone of five-mile radius.

• **Two-way communication equipment:** a requirement for operating within either region; radio contact at all times would be mandatory.

The problem is not a new one, but it has been growing to new proportions year by year since the introduction of faster post-war transports.

Past suggestions to alleviate the congestion by raising VFR minimums to some higher value have all fallen by the wayside. Such measures were inclined to penalize local operations and only tended to invite a pilot to approach an airport VFR under marginal conditions and circumvent the higher minimums.

At this point the all-pilot committee came into being. Formed in July under the sponsorship of ATA and headed by Byron Moe, director of flight for All-American Airways, its members included W. T. Kalmbach-Chicago & Southern, R. B. Silver-Colonial Airlines, W. D. Williams-United Air Lines, and A. M. Banks-Wisconsin Central Airlines.

Objecting to the latest proposal to raise VFR minimums to 1,500 feet and five miles visibility, the committee finally arrived at the following:

• **An initial speed control area** is established for a region roughly 20 miles in radius from the center of the airport and extending from the field elevation to an altitude of 3,000 feet. Within this area all aircraft will be restricted to 180 mph indicated airspeed.

• **A speed control zone** coinciding with today's "control zone," an area roughly five miles in radius from the center of the airport and of the same 3,000 foot ceiling. Here the restricted speed will be 150 mph.

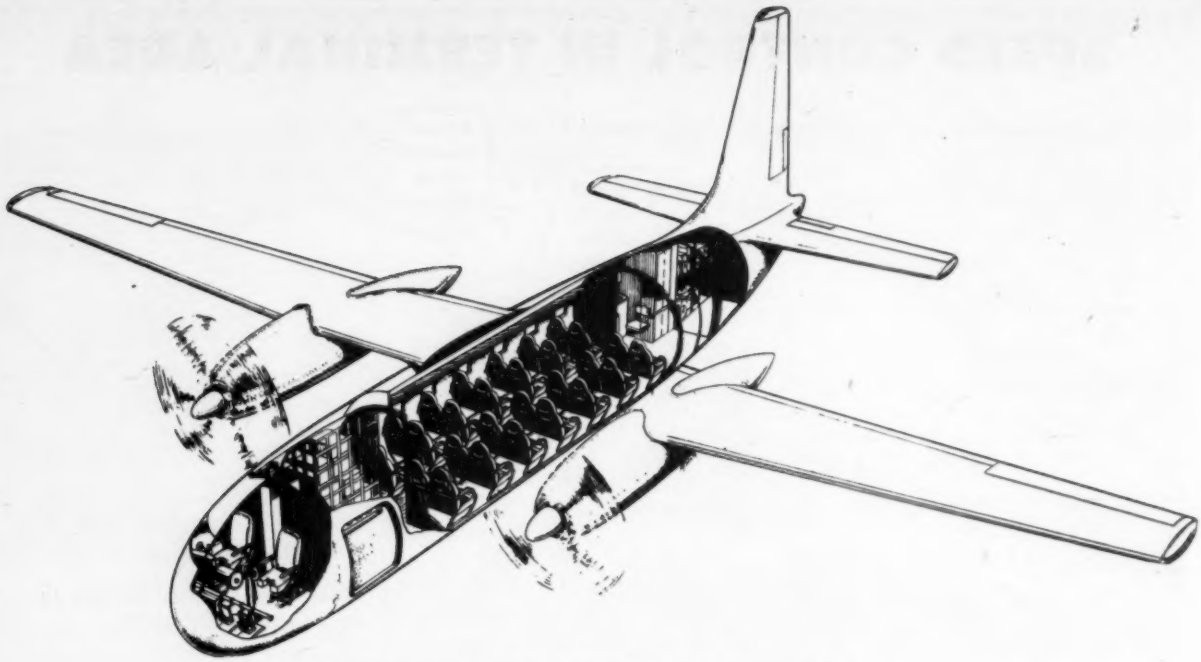
• **Two-way communication equipment** will be required for all aircraft within the 20-mile speed control area when operating over 700 feet altitude, and within the five-mile speed control zone regardless of altitude.

Where would the new rules be applied? The committee's answer is "designated high density traffic areas," locations such as New York, Chicago, and Washington. Just which locations would be determined by the CAA.

How does speed control compare with what we have today? Assuming the extreme, a Douglas DC-6 pilot with "cowboy" aspirations enters the 20-mile area at 300 mph, has reduced speed to 240 mph five miles out, and to 150 mph at the two-mile point. Recommended good practice in today's operation calls for 240 mph, 180 mph, and 150 mph respectively.

Elapsed times? The net difference between today's good practice and the proposed speed control is one minute and 17 seconds. The "cowboy" covers the 20 miles to touchdown in four minutes 33 seconds, good practice adds up to five minutes and 33 seconds, and speed control would take six minutes and 50 seconds.

The only stumbling block appearing in the path of adoption is the radio requirement and its effect on the small plane pilots. With the purpose at stake —insurance against a mid-air collision— the interests of safety will probably prevail.



ARTIST'S SKETCH of the Fokker F-27 showing rear-facing seats.

First Details of New Fokker F-27 Transport

Fairchild may build it in United States under license, if survey shows market for twin-engine craft.

By ANTHONY VANDYK

FIRST FOREIGN TRANSPORT aircraft to be built in the United States may well be Holland's Fokker F-27, a twin-engine feeder plane now in the mock-up stage. Fairchild Airplane and Engine Corp. has secured the license to build the model—as well as other aircraft developed by the Dutch company—and plans to start production if a market survey shows that there is sufficient demand.

Fokker itself is also actively investigating the sales potential in other parts of the world and on the basis of findings will move the project into the prototype stage.

Bearing a superficial resemblance to the Fokker F-24 (itself very similar to the Douglas DC-5) which was ordered by KLM Royal Dutch Airlines in 1939 but never put into production because of the war, the F-27 incorporates the Dutch company's many years of transport-building know-how (between 1925 and 1935 high-wing Fokker aircraft were standard equipment on a high proportion of the world's airlines).

The F-27 is, however, new in every respect, from its turboprop powerplant to its rearward-facing seats. For operators desiring a less "new-fangled" aircraft it is also available with piston engines, with or without pressurization.

The F-27 was primarily designed as a Douglas DC-3 replacement but is also available as a commercial freighter and a military cargo plane. The passenger version is known as the "Friendship" and the commercial cargo version is called the "Freightship".

High Wing Advantages

The plane makes a particularly useful freighter as the high wing makes possible low loading facilities and a low cabin floor. Although this configuration causes an increase in structure weight due to the greater understructure, a better aerodynamic shape (nacelle-wing and body-wing configuration) results in a greater take-off weight, thereby justifying the increased empty weight. Moreover, the improved vision for passengers is another factor in favor of the high wing.

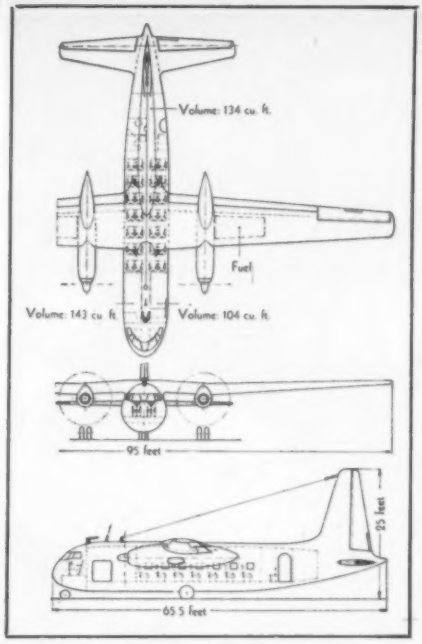
Fokker has proposed two types of power plant for the F-27: the Rolls-Royce Dart R Da 3 turboprop developing 1,400 shp plus 365 pounds jet thrust static take-off power at 14,500 rpm at sea level; and the Wright Cyclone 955 C9HE2 developing 1,525 take-off power hp at 2,800 rpm (with water injection).

In the turboprop version the cabin pressure at 20,000 feet is equivalent to 8,000 feet. Fuel stored is in two integral wing tanks each equipped with a filler neck located near the leading edge of the wing, thereby avoiding refueling on the top of the wing.

The tricycle undercarriage is hydraulically actuated and steered; hydraulics are also used to actuate the wheel brakes, flaps, and windshield wipers.

The fuselage of the F-27 is of all-metal semi-monocoque construction assembled together with a number of trusses and partitions throughout the length of the profile and a countersunk, riveted alclad outside skin. The one-unit wing is of stressed-skin construction, assembled with two spars, a number of ribs, longerons or stiffeners, and a countersunk, riveted alclad outside skin; it is equipped with removable wing tips.

The joining of the wing to the fuselage takes place by attaching to the forward and rear spars at the junction of the lower skin with both sides of the body walls and by the junction of the understructure of the forward and rear spars with the top wall of the body. At the location of the wing the body side walls are reinforced to absorb high



THREE VIEWS of Fokker F-27.

stresses during an emergency landing and the underneath of the body is similarly stressed.

In addition to building a whole range of its own transport aircraft in the between-war years, Fokker obtained the European sales rights for the Douglas DC-2 and DC-3 in the Thirties. Thus at the end of the war the firm was able to use its know-how of Douglas Aircraft Company's commercial products and set to work converting C-47's and C-54's into commercial transports for several airlines. The Dutch manufacturer did not, however, re-enter the airliner manufacturing field for some time, and in the immediate post-war years was mainly pre-occupied with the development of trainers.

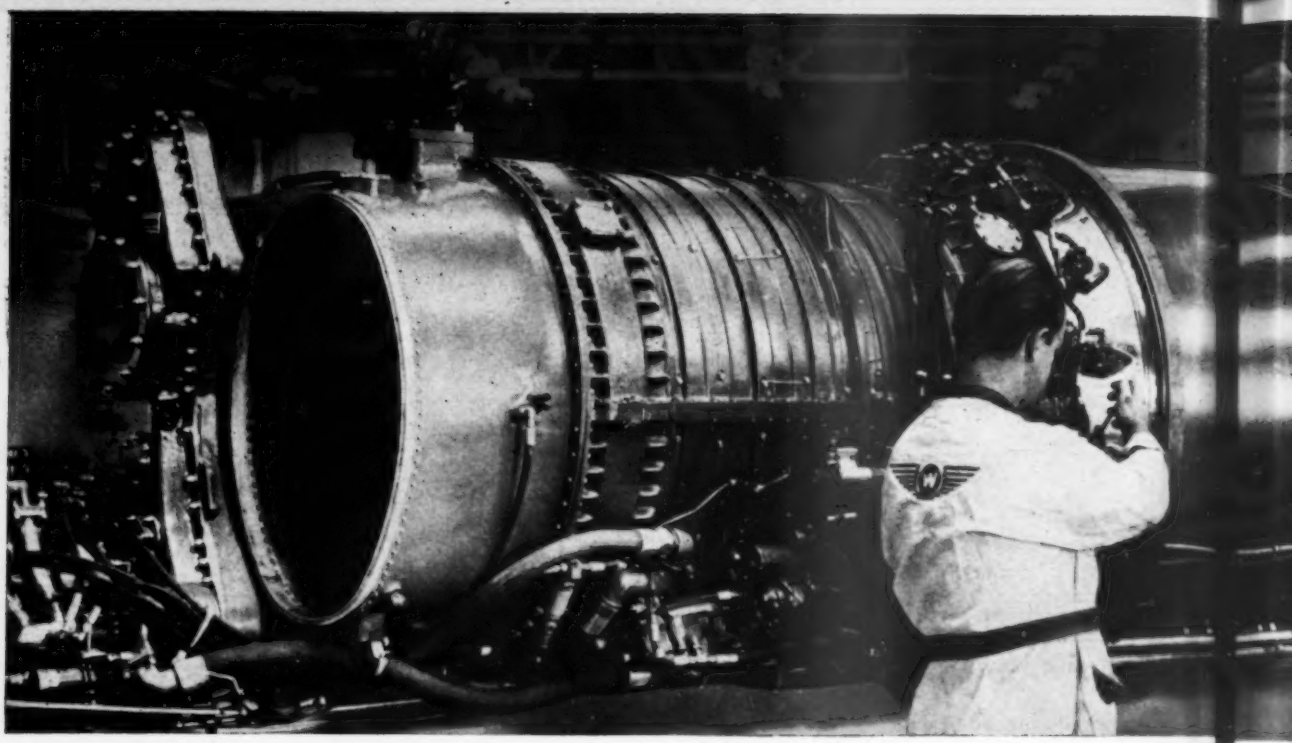
However, as long ago as 1946 Fokker exhibited a scale model of a 17-passenger twin-engine jet airliner at the Paris aircraft show, but did little more than preliminary development work on the project. There was also another interesting Fokker jet project based on a pre-war design for a four-engine, mid-wing aircraft with twin booms. This design featured a wing with a very thick center section and was reminiscent of the Burnelli aircraft.

The fact that the Dutch government controls both Fokker and KLM is significant for the future of the F-27. Prior to 1935 the Dutch airline bought a very high proportion of its equipment from Fokker and today there are indications that the government wants history to repeat itself: KLM and Fokker make a formidable team.

Engineering-Operations Data
F-27 "Friendship" Passenger Transport

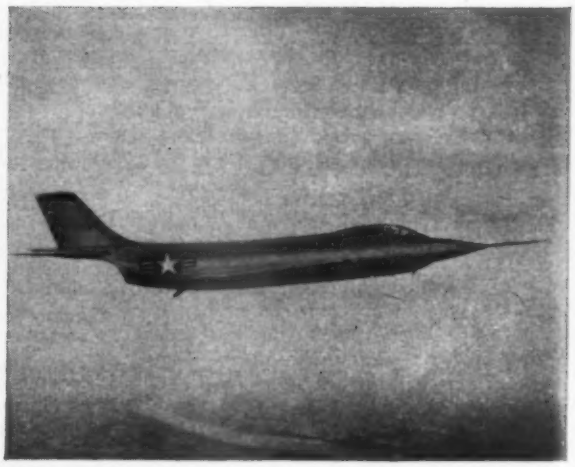
	ROLLS-ROYCE DART R DA 3	WRIGHT 955 C9HE2	
Dimensions		**Pressurization**	**No Pressurization**
Span (feet)	95	95	95
Length (feet)	65.5	65.5	65.5
Height (feet)	25	25	25
Wing area (sq. ft.)	754	754	754
Weights			
Empty weight (lbs.)	19,950	21,845	21,300
Crew (3) (lbs.)	475	475	475
Airline supplies (lbs.)	110	110	110
Fuel (lbs.)	3,375	1,950	1,920
Oil (lbs.)	78	288	288
Food (lbs.)	110	110	110
Freight (lbs.)	2,000	770	1,345
Baggage at 44 lbs. per passenger (lbs.)	1,232	1,232	1,232
28 passengers at 165 lbs. (lbs.)	4,620	4,620	4,620
Maximum take-off weight (lbs.)	31,950	31,400	31,400
Maximum landing weight (lbs.)	31,300	30,950	30,950
Wing loading (at take-off) (lbs./sq. ft.)	42.4	41.6	41.6
Power loading	10.4 lbs./ehp*	10.3 lbs./hp	10.3 lbs./hp
Wing loading (at landing) (lbs./sq. ft.)	41.5	41.1	41.1
Performance			
Max. speed at 20,000 feet (mph)	274	....	....
Max. cruising speed (mph /feet)	....	254/15,000	252/10,000
Economical cruising speed at 20,000 ft. at 2 x 700 shp	246	....	....
Economical cruising speed at economical cruising power (mph/feet/hp)	....	245/15,000/2 x 765	234/10,000/2 x 770
Service ceiling (feet)	33,500	25,100	25,100
Service ceiling (one engine) (feet)	11,800	9,200	9,200
Take-off distance over 50-ft. obstacle (ICAO) (feet)	4,200	4,200	4,200
Landing distance over 50-ft. obstacle (ICAO) (feet)	3,770	3,600	3,600
Stage length with above-mentioned fuel and cruising speed (miles)**	310	310	310
Block speed (mph)	208	206	203
Direct operating costs—310-mile stage			
(SBAC method, 100% load factor)			
Direct operating costs (cents per ton-mile/annual utilization in hours)	15.6/3,000 16.8/2,000	18.2/3,000 19.7/2,000	16.6/3,000 17.9/2,000
(cents per aircraft-mile/ annual utilization in hours)	61.5/3,000 66.3/2,000	60.5/3,000 65.4/2,000	59.9/3,000 64.4/2,000

** 1,540 ehp (ehp = shp + thrust in lbs./2.6)*
*** Including reserve fuel for a distance of 230 miles at $v = 1.1 \times v_{max}$ at cruising height plus 35 minutes stand-off at 5,000 ft. plus 10 minutes final circuit. An allowance of 5% is given on the specific fuel consumption from engine specification.*

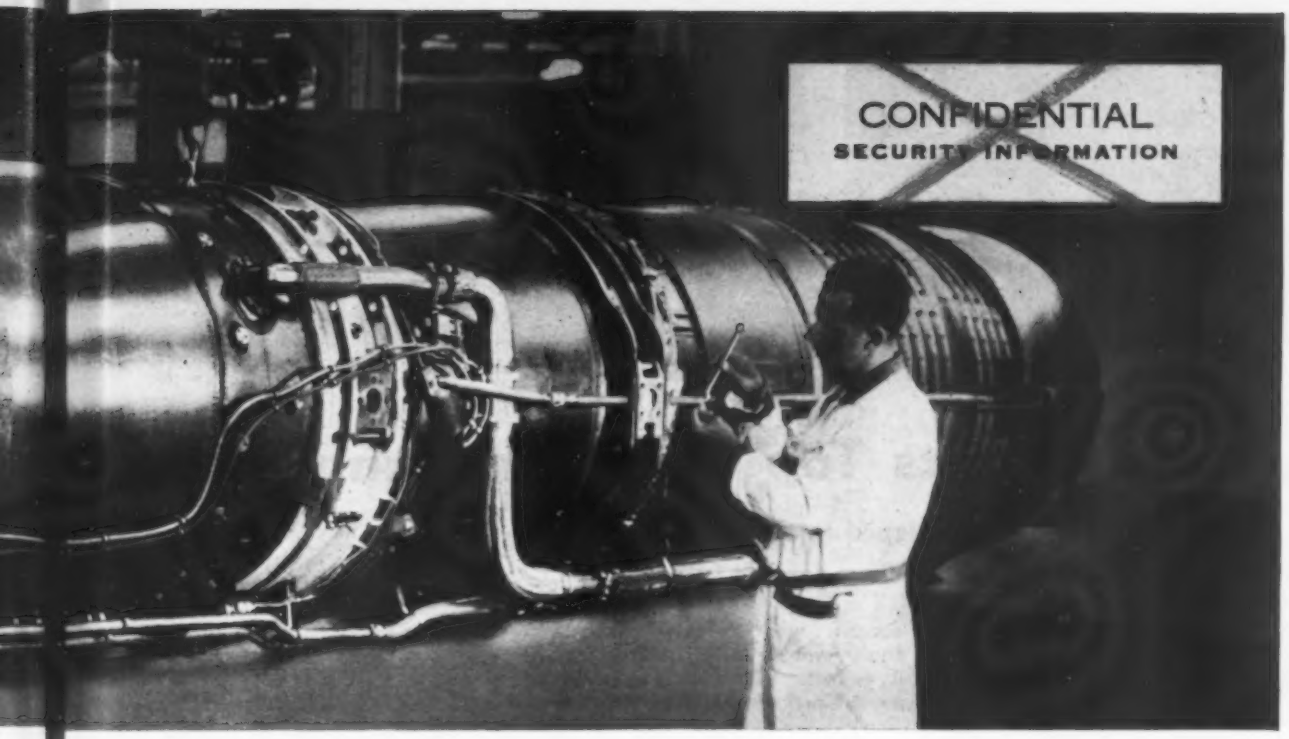


U. S. Navy and Westinghouse reveal

F4D "Skyray", built by Douglas, is being prototype-tested with an earlier model of the Westinghouse J40. Production versions will be powered by the new J40 or by later developments of this engine.



F3H "Demon" will soon be in quantity production. It was especially designed by McDonnell to fully utilize the tremendous thrust of this and the even more powerful Westinghouse J40 engines of the future.



world's most powerful jet engine

The United States Navy and the Westinghouse Electric Corporation have just qualified the world's most powerful turbojet aircraft engine . . . the J40. It develops more than 25,000 horsepower at flight speeds. The new engine has successfully completed the Defense Department's grueling 150-hour qualification test and is now approved for quantity production.

This single engine is two and a half times as powerful as the combined *four* engines of a B-29 Superfortress. Its weight, however, is only about 3500 pounds . . . less than that of *one* of the B-29's engines and propellers. The slim engine is twenty-five feet long and about forty inches in diameter. It produces more thrust per square foot of frontal area than any other turbojet. Like all Westinghouse engines, it is of the axial-flow or straight-through design.

As delivered to plane manufacturers, for production aircraft, it will be the first engine to provide constant speed drives for airplane accessories as an integral part of the engine . . . providing substantial savings in plane weight and space.

Two new Navy fighter planes will be powered by this new jet engine which was designed by Westinghouse in co-operation with the Navy Bureau of Aeronautics. These are the McDonnell F3H "Demon" and the Douglas F4D "Skyray". Even more powerful versions of the J40 are being developed for these and other aircraft.

Westinghouse, builder of the first American-designed jet engine, has been working with the military services on turbojet design and development since the day after Pearl Harbor. Behind the glamour of these jets is the intensive effort of hundreds of scientists and engineers. Progress in jet propulsion is not easily made. What seem like insurmountable obstacles sometimes arise. Like other companies, however, Westinghouse has encountered and successfully met such situations.

Westinghouse is investing millions of dollars and man-hours to help keep American jet-propulsion leadership. Jet engines are produced at the South Philadelphia and Kansas City plants of Westinghouse. Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Penna.

J-54012

YOU CAN BE **SURE**...IF IT'S

Westinghouse

R. E. Gross

H. L. Hibbard

C. S. Gross

C. B. Squier

B. C. Monesmith

Lockheed Shifts Top Brass for Planning

Major reshuffling designed to tighten controls and keep company in competitive picture for the future.

By Fred S. Hunter

A MAJOR MANAGEMENT realignment was put into effect earlier this month at Lockheed Aircraft Corp. in a move to strengthen the company's long-range planning.

High points in the broad organizational change, which President Robert E. Gross said will provide "more effective controls under new and changing conditions," are as follows:

• **The management policy committee** was expanded by the addition of Hall L. Hibbard, vice president-engineering. Other members are Robert E. Gross, Courtlandt S. Gross, C. A. Barker, Jr., and Cyril Chappellet.

• **Courtlandt S. Gross,** previously vice president and general manager, was named executive vice president of the entire Lockheed corporation, including both the California and Georgia divisions and realigned subsidiaries. He will also serve as the link between the operating organization and the five-man policy committee.

• **Burt C. Monesmith,** recently promoted from manufacturing manager to vice president-manufacturing, was advanced to vice president and general manager of the California division. Daniel J. Haughton continues as vice president and general manager of the Georgia division at Marietta.

Appointment of Hibbard to the policy committee is recognition of the greater importance of engineering in the determination of policies and goals as the aircraft industry grows increasingly competitive, Robert E. Gross said.

In the realignment Carl B. Squier, vice president-sales, becomes vice president and assistant to the president. Charles F. Thomas, military relations director, who formerly reported to Squier, will report to Hibbard. Leonard K. Schwartz will continue to head commercial aircraft sales as director of commercial sales, but will report to Monesmith instead of Squier.

The change, Gross said, reflected "radical changes in Lockheed's size and in the nature of its business in recent years." He cited:

• **Volume of military and commercial** business has increased many times in the past few years, not only in aircraft manufacturing, but also at Lockheed Air Terminal, Lockheed Aircraft Service, and Lockheed Aircraft Service International, all wholly owned subsidiaries, and Pacific Finance Corp., in which Lockheed owns a major interest.

"Saleable Planes"

• **Increasing competition,** which places a premium on sound, long-range planning in all parts of the management structure—"to keep us in the market with saleable planes five, 10, and 15 years from now."

• **Increasing complexity** of aircraft, with multiplied problems in fields such as design, tooling, and controls.

The new plan brings new titles and responsibilities to many California Lockheed officials. The Georgia division was not affected.

Monesmith's organization will include:

H. R. Campbell, formerly assistant treasurer and assistant secretary, now director of administration, a new position.

Clarence L. (Kelly) Johnson, formerly chief research engineer, now chief engineer.

G. A. Fitzpatrick, formerly production manager, now manufacturing manager.

Leonard K. Schwartz, director of commercial sales.

Harold Harrison, master scheduling manager.

Joe Towle, director of flying operations.

Under Campbell will come: Robert B. Bias, military contracts administration manager; D. H. Cameron, director of industrial relations; I. P. Grunwald, director of financial operations (formerly assistant comptroller), and C. F. Nielsen, director of parts and services.

Engineering assignments under Kelly Johnson include: J. B. Wassall, formerly chief project engineer, made assistant chief engineer; C. C. Coleman, chief aerodynamics engineer; Willis M. Hawkins, chief preliminary design engineer; W. R. Jones, chief staff engineer; M. C. Haddon, formerly Constellation project engineer, now chief project engineer; J. F. McBrearty, chief structural engineer; R. L. Thoren, chief flight test engineer; and Walter W. West, engineering systems manager.

Under Fitzpatrick are: Herbert Caldwell, formerly works manager Factory B, named production manager; D. J. Gribbon, formerly Plant C works manager, named Factory B works manager; W. A. Pulver, formerly assistant project engineer, made Factory C works manager.

Several corporation-wide functions are aligned under management policy committeemen. Reporting to Cyril Chappellet, vice president-administration, are John E. Canaday, director of public relations; H. M. Porter, industrial relations counsel; Roger B. Smith, chief legal counsel; and L. W. Wulfekuhler, corporate secretary.

Reporting to C. A. Barker, Jr., vice-president-treasurer, is D. E. Browne, comptroller.

Transport Aircraft Operating Costs
Coach Service Cost Per Revenue Passenger-Mile

Aircraft Type and Revenue Passenger Load Factor		Total Cost by Length of Trip (Miles) [1]				
		186	340	724	1093	2475
DC-4	65%	4.80¢	3.69¢	3.01¢	2.81¢	2.65¢
	70	4.59	3.53	2.85	2.66	2.49
	75	4.39	3.26	2.70	2.50	2.34
	80	4.23	3.21	2.57	2.38	2.23
DC-6 (70 seats)	65%	5.13	3.99	3.25	3.03	2.86
	70	4.93	3.80	3.09	2.88	2.71
	75	4.70	3.61	2.91	2.71	2.55
	80	4.55	3.48	2.81	2.61	2.45
DC-6B (82 seats)	65%	5.12	3.97	3.25	3.04	2.88
	70	4.89	3.79	3.08	2.88	2.72
	75	4.65	3.57	2.89	2.70	2.54
	80	4.47	3.43	2.77	2.57	2.42
L-049 (81 seats)	65%	5.30	4.16	3.44	3.24	3.07
	70	5.06	3.97	3.26	3.06	2.91
	75	4.85	3.79	3.10	2.91	2.74
	80	4.66	3.63	2.95	2.77	2.60
L-649 (81 seats)	65%	5.38	4.23	3.51	3.30	3.14
	70	5.14	4.03	3.32	3.12	2.96
	75	4.92	3.86	3.17	2.96	2.80
	80	4.72	3.68	3.01	2.82	2.66
L-749 (81 seats)	65%	5.48	4.33	3.60	3.39	3.21
	70	5.24	4.12	3.40	3.19	3.04
	75	5.01	3.94	3.24	3.04	2.88
	80	4.81	3.76	3.07	2.89	2.72
L-1049 (88 seats)	65%	5.61	4.44	3.67	3.45	3.30
	70	5.30	4.16	3.43	3.24	3.06
	75	5.09	3.99	3.28	3.07	2.92
	80	4.91	3.82	3.14	2.94	2.79
B-377 (90 seats)	65%	6.48	5.20	4.37	4.14	3.98
	70	6.19	4.94	4.14	3.91	3.75
	75	5.87	4.67	3.90	3.68	3.51
	80	5.64	4.47	3.73	3.52	3.35

[1] *These coach trips are assumed to be made in one hop excepting the 2,475-mile trip which is assumed to include one fuel stop.*

Source: CAB Form 41 reports.

Costs & Equipment No Coach Problem

Scheduled lines well set up to meet future demand, CAB air operations bureau testifies.

By William V. Henzey

AS FAR AS equipment is concerned, the certificated airline industry will be in a healthy position to meet the nation's demands for air coach service in future years, according to exhibits of CAB's air operations bureau submitted in the Large Irregular Air Carrier Investigation. The bureau also feels that such services can be operated economically at current coach fares.

These were the first major points brought out as hearings in the giant investigation got under way earlier this month. Although drawing no conclusions as yet on the touchy problems involved in the investigation, the bureau's exhibits forecast the potential availability of 38 billion seat-miles in 1954, if all four-engine aircraft available at that time are adapted for high-density coach operations. This compares with 18.2 billion seat-miles operated in 1951 by U. S. domestic and international trunk carriers.

Far from proposing that all except coach services be eliminated, the exhibits instead tend to indicate the maximum potential that will be available, a factor necessary in determining whether or not supplemental services by large irregular air carriers will be required.

Significant in these exhibits are the constructed cost figures which illustrate that all current four-engine planes, with the exception of the Boeing Stratocruiser, can be operated at current or perhaps lower coach fares in moderate to long-haul services. On short hauls, unit costs are higher and would apparently have to be supported by long-haul revenues, unless a tapering fare structure is employed (see table).

Bureau witnesses indicated the Stratocruiser would probably fit into the same category with other four-engine planes in their studies if arrangements could be made for seating 110 coach passengers instead of 90 passengers as at present. The studies do not include data on the proposed Douglas DC-7.

The presentation of these matters by the bureau, however, without any specific conclusions, touched off the first fireworks in what many believe will be CAB's longest and perhaps most controversial case. One attorney, Clayton L. Burwell, representing non-scheduled airlines, moved unsuccessfully for dismissal of the bureau from the investigation because (1) it would not take a position, and (2) it was "partisan."

"Pioneering"

Bureau Counsel Ronald H. Cohen indicated a position would be taken when a "record has been made in the case." But Burwell indicated he may request the appearance of Gordon M. Bain, director of the bureau, as an adverse witness, contrary to the schedule contemplated by Cohen.

Meanwhile, two other major parties to the case, the Air Coach Transport Association and the Post Office Department, followed the bureau's presentation on so-called general policy matters.

The coach group, representative of many non-scheduled airlines, led off with Dr. Kemper Simpson in an initial drive to show that non-scheduled carriers' "pioneering" of the coach market has, in effect, stimulated traffic development of the certificated carriers.

Dr. Simpson, an economist of some 35 years standing and lately affiliated with the Economic Cooperation Administration, emphasized his belief "in free entry into the competitive system." He said the competition of the non-scheduled lines has been healthy for the industry as a whole.

However, he was critical of the scheduled airlines' coach efforts. "Proof that the scheduled airlines had no real understanding of the public need for low-cost air travel was their failure in 1951 to maintain the conservative rate of growth attained in 1950," Simpson said.

The economist introduced figures which showed that the 7.9% ratio of coach passengers to total passengers of

H. M. Anderson
Chief Flight Dispatcher
Aug., 1927

C. Barkes
Vice Pres.–Finance & Property Nov., 1925

B. J. Bartholomew
Secretary
Mar., 1926

H. M. Beery
Chief Flight Dispatcher
July, 1927

P. Berger
Technical Instructor
June, 1926

N. J. Bousman
Lead Shop Mechanic
July, 1927

J. R. Cunningham
Director of Communications
Dec., 1926

R. G. Darke
Station Ground Services Manager July, 1927

R. L. Dobie
Station Ground Services Manager Apr., 1926

R. D. Edwards
Station Ground Services Manager July, 1927

P. S. Elsasser
Chief of Storekeeping
Aug., 1927

C. E. Ferry
Assistant Foreman
June, 1927

G. B. Grogan
Station Ground Services Manager July, 1926

R. J. Grospitch
Dispatch Representative Sept., 1927

S. V. Hall
General Mgr. of Ground Services Jan., 1926

W. P. Hoare
General Manager Maintenance June, 1927

H. W. Huking
Captain
July, 1927

R. W. Ireland
Vice President–Traffic
Mar., 1926

O. E. Kline
Lead Line Mechanic
Sept., 1927

E. P. Lott
Director of Flight Dispatch
Nov., 1925

E. S. Maroney
Station Ground Services Manager July, 1927

S. P. Martin
Secretary of Corporation
Aug., 1927

W. H. Maxwell
Station Ground Services Manager Aug., 1927

J. J. McVeigh
Crew Scheduler
Aug., 1927

R. A. Prince
Foreman
Aug., 1927

E. L. Remelin
Captain
Apr., 1927

E. M. Rosier
Administrative Assistant
July, 1927

M. G. Rundle
Lead Line Mechanic
Aug., 1927

H. F. Salisbury
Staff Assistant–Tech. Maintenance July, 1927

W. F. Schmitt
Dispatch Representative
Aug., 1927

H. Smith
Lead Payroll Accountant
Feb., 1927

D. Stombaugh
Plane Overhaul Manager
July, 1927

F. W. Tanner
Supv.–Mechanical Service
Aug., 1927

H. W. Thomas
Chief of Station Ground Services July, 1927

W. S. Tuttle
Flight Dispatcher
Aug., 1927

D. W. Tyler
Maintenance Procedures Technician Jan., 1927

59

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(Dates represent beginning of service with United)

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Salesman
Sept., 1926

R. S. Buess
Technical Instructor
Aug., 1927

E. J. Burda
Accountant
Sept., 1927

R. J. Burns
Dispatch Representative
July, 1927

L. R. Carr
Test Flight Tech.–Radio & Elec. July, 1927

H. Costa
Lead Shop Mechanic
May, 1927

R. W. Gehr
Flight Dispatch Manager
July, 1927

E. M. Gordon
Manager of Purchasing & Stores June, 1927

J. Gowans
Supervisor of Statistics
July, 1927

R. J. Johnson
Captain
July, 1927

J. K. Keller
Lead Line Mechanic
Aug., 1927

H. L. Kinsey
Line Aircraft Inspector
Sept., 1927

H. A. Mossman
Foreman
July, 1927

H. E. Nourse
Vice President–Economic Controls May, 1927

C. V. O'Callaghan
Special Assignment
Oct., 1926

R. J. Sedlacek
Maint. Base Aircraft Inspector July, 1927

C. A. Sluder
Station Ground Services Manager July, 1927

R. L. Wagner
Captain
July, 1927

C. M. Wall
Station Ground Services Manager July, 1927

W. D. Williams
Manager of Flight Operations Aug., 1927

G. Wood
Purchasing Manager
July, 1927

R. C. Wright
Assistant Treasurer
June, 1927

C. T. Wrightson
Station Ground Services
June, 1925

Large well placed windows give the Chase Assault Transport pilot unobstructed vision as he comes in for a forward area landing.

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Chase AIRCRAFT CO., Inc.
WEST TRENTON, NEW JERSEY
STROUKOFF AVITRUC

the certificated trunk lines in 1950 dropped to 7.4% in 1951. Similarly, he indicated, the ratio of coach to total revenue passenger-miles dropped from 13.6% in 1950 to 12.4% in 1951.

Meanwhile, the Post Office Department, unwittingly a controversial party to the case, presented assistant postmaster general John M. Redding to clarify a "misunderstood" statement of the Department made in August. The statement was interpreted at that time as indicating a desire on the part of the PO to contract with large irregulars for the carriage of mail whenever the occasion demands.

Redding testified that the PO's entry into the case was solely to enter objections to certification of the large irregulars for the transportation of mail. He added also that the PO does not support exemption applications of the non-scheduled lines.

And then there were . . .

Two non-scheduled airlines, Remmert-Werner, Inc., and New England Air Express, were dropped from CAB's Large Irregular Carrier Investigation last week for failure to prosecute their applications. A third carrier, American Air Transport, Inc., was ordered to terminate operations October 11, for "flagrant" violations of the Civil Aeronautics Act. Such a termination order is tantamount to dismissal from the investigation unless the carrier secures a stay order from the courts. Sixty-four large irregulars were parties to the investigation when it got under-way.

Two reasons were given by the official for the Department's position:

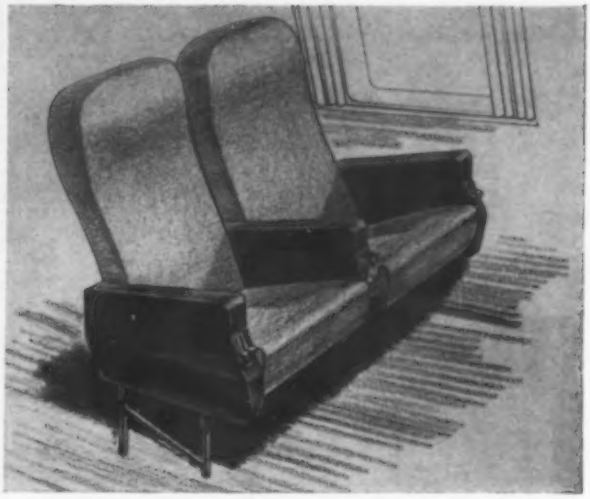
- **The non-scheduled lines** offer no particular asset to the present structure of the mail-carrying schedules.
- **If they were certificated,** it would add to the subsidy burden which the PO is now entrusted with paying.

On the contract angle, Redding said, "We may wish in the future to move mail in plane-load lots. This may be accomplished in the future either through Congressional permission to the Post Office to contract with the carriers, or by application of the Post Office to CAB to provide for plane-load rates for mail."

In either event, he said, the PO wants to be in the position to contract with any carrier, scheduled or non-scheduled. Redding added that no "present" plans exist on the contract angle.

Hearings in the case are scheduled for four cities and should continue well into next year. Still to be heard are arguments of the scheduled airlines and the individual large irregular applicants.

AFT-FACING SEAT designed by Burns Aero Seat Co., Burbank, Calif., for high density interior installations. Seat is stressed for 9 g loads and symmetrical design also permits use as forward facer.



ARTIST'S VIEW of a 9 g aft-facing seat designed by Burns Aero Seat Company to meet military specifications for Convair T-29. Of tubular construction, seat can be adapted to any airplane by minor modifications.

What's Ahead for the Rear-Facing Seats?

High survival record in recent crashes points up safety arguments, but new questions arise.

By JOSEPH S. MURPHY

THE REARWARD-FACING cabin seat can't be counted on yet as a requirement of future transport aircraft. A Handley Page Hermes crashed late last month in the Mediterranean off the coast of Sicily and 50 of the 57 passengers survived. Another Hermes made a forced landing and burned a month earlier in France and all escaped. Both planes were fitted with aft-facing seats.

But the issue is just as two-sided as its subject. Similar favorable experience can be shown for aircraft with the conventional seat installation. Early this year a Convair 240 crashed in the bay near La Guardia Airport with no fatalities. Another crashed in a field near Memphis, climbed over a road embankment, and settled again, damaged beyond repair, but no fatalities.

The Civil Aeronautics Board was most anxious to decide the issue one way or the other this year during the recent annual review of airworthiness regulations. The industry felt otherwise, hesitant to be drawn into a requirement supported only by assumptions that an aft-facing seat is safer, without very much actual crash experience that would prove it so. The decision to wait until the facts are known appears to be a good one, for that experience is already starting to accumulate.

In the meantime this is about the way things shape up:

• **There will be an ever-increasing** number of transports in the U. S. equipped with the aft-facers. Their use will not be confined to the military.

• **Use in Great Britain** has spread from the RAF Transport Command to several charter carriers under contract with the Air Ministry. Other overseas airlines are planning their use.

Military Program

• **Increased use will spur** the advance in design of the aft-facing seat, one of its weak points cited in the past.

• **An organized research program** will be established to assemble the facts that this increased usage will generate over the next several years.

In the U. S. both the Navy Bureau of Aeronautics and the USAF Military Air Transport Service have swung over to the aft-facing seat on all future transports. The Navy version of the Douglas DC-6B (R6D) for use by the Fleet Logistic Airwing, Pacific, has already been delivered with them.

Other planned uses by the Navy include the Lockheed Super Constellation (R7V), the Convair turboprop flying boat transport (R3Y), and possible refitting of Douglas DC-4 (R5D) transports when scheduled for heavy maintenance work.

MATS plans for using the rear-facing installation, said to be the culmination of five years of study and development by the USAF's Air Materiel Command, involve all future transports. The first known application will be the Convair C-131, a medical air-evacuation version of the commercial Convair 240. The seats will be stressed for nine g's and will be of a stowable type.

Aside from the military uses there is strong indication of other applications in this country. North American Airlines, a large non-scheduled air carrier, has asked the Burns Aero Seat Company of Burbank, Calif., to design a symmetrical seat, which if not found acceptable in the aft-facing position, could be used as a forward-facer without additional expense. North American plans to equip one of its four-engine aircraft and to survey passenger reaction with questionnaires.

Abroad, particularly in England where the aft-facing seat first came into prominence, its use has spread from the Royal Air Force Transport Command to several carriers under contract to the British War Office. Lancashire Aircraft Corporation is operating 36-passenger Avro York's in trans-Atlantic contract operations twice monthly. Airwork, Ltd. has equipped a number of Handley Page Hermes aircraft for simi-

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SUPER CONSTELLATIONS MAKE MONEY FOR AIRLINES

KLM Royal Dutch Airlines have just placed their *third* successive order for Super Constellations. Here is powerful indication of a famous airline's opinion of this larger, more luxurious successor to the experienced Constellation. KLM plans to put their Super Constellations into service on the heavily competitive North Atlantic route, where long range and superior performance are paramount.

Announced simultaneously was a new order for Super Constellations placed by Linea Aeropostal Venezolana. LAV also made their selection after careful consideration of the finest competitive equipment. This choice is backed by their long previous experience with dependable Constellations.

Why have a total of 12 world airlines ordered Super Constellations, bringing Lockheed's Constellation production line to the greatest peak in its continuous 8 year history?

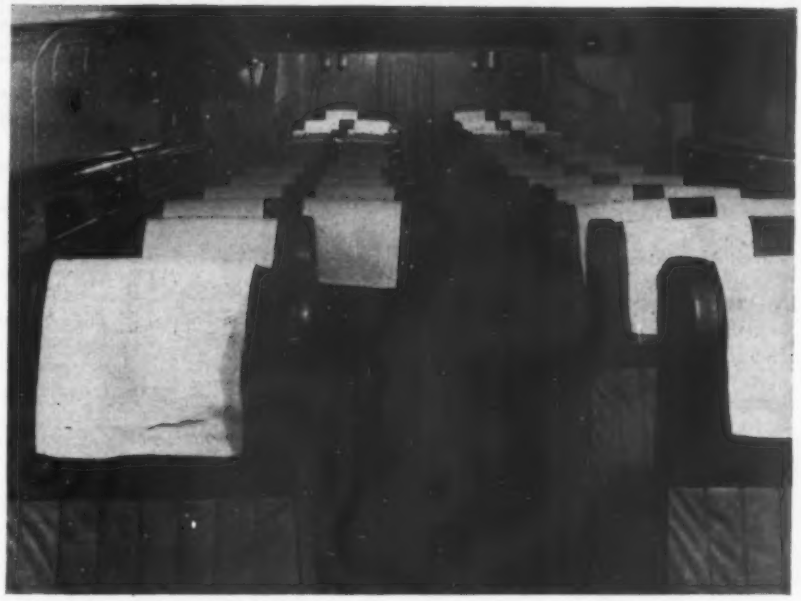
The answer is very simple—*it's because this great airplane has been proved to make money.*

RECORD REORDERS

Here are some of the basic reasons why the Constellation has been reordered more often than any other modern airliner:

1. It offers longer life and therefore greater profit on the investment—because it is designed to grow further. (The Super Constellation now flies 133,000 pounds at 350 m.p.h., and when more powerful engines are available it will carry 150,000 pounds at 425 m.p.h.).
2. The Super Constellation is versatile and can be easily changed in a few hours to carry as many as 94 passengers. Thus it can be used for many purposes on many routes to meet changing competitive conditions.
3. Airlines like its low operating cost. It is practical and reliable, and it makes money.
4. It has longer range than any other commercial airplane.
5. It can match in speed the competitive schedules of any airliner.
6. Operators like it because travelers like it—for dependability, luxury and speed.

Thus the Constellation and now the Super Constellation are currently playing a vital role in profitable airline operation, at the same time giving assurance of future profit because of the built-in "growth factor" not found in any other airplane.



VIEW LOOKING FORWARD, showing aft-facting seats in A. V. Roe York aircraft operated in trans-Atlantic charter service by Lancashire Aircraft Corporation, Ltd. Seats are stressed to 9-12 g's and were manufactured by L. A. Rumbold & Co. Ltd., London.

lar operations carrying up to 60 passengers. KLM Royal Dutch Airlines is considering installing a stowable type aft-facer in the Douglas DC-6A cargo aircraft now on order. The plan would call for a 78-passenger interior for transportation of immigrants and other contract passenger operations.

A third center of action on the issue, and nearest to the regulatory stage, is Australia. There, the Department of Civil Aviation, convinced of the value of aft-facing installations, earlier this year acted to require a 12-g seat in all future aircraft of Australian registration. The order, still under consideration, has not yet been issued.

The Issues

Australia had also advocated to the International Civil Aviation Organization that aft-facing seats stressed to 25 g's be made mandatory for new aircraft designs, but ICAO in its Fourth Session of the Airworthiness Committee in April, 1951, concluded that insufficient information was available to formulate a detailed requirement.

The real issues at stake appear to be: "Is the aft-facing seat safer, and is the margin of safety sufficient to warrant the weight penalty and exposure to adverse passenger reaction it brings?" The answers now are conflicting.

Proponents offer these advantages as the case for adoption:

- **Elimination of head injuries** resulting from the jack-knife action of the body pivoting about the safety belt and striking the back of the seat ahead.
- **Better and uniform support** of the body will reduce internal injuries.
- **The temporary shock** attributed to restraint of the safety belt which "paralyzes" occupants during the critical period immediately following the crash is overcome.

The opponents, or let us say, the un-convinced, find the source of their apprehension as to the relative merits of the aft-facers in these points:

- **The lack of appreciable evidence** that the aft-facer is a great deal safer in crashes of a survivable nature, assuming that many are not.
- **The knowledge that crash forces** in survivable accidents are anything but directly forward, and knowledge of the need for actual crash studies to provide the design criteria that will insure an aft-facing seat offering the same protection as the existing forward-facing seat under these conditions.
- **The exposure it offers** to adverse passenger reaction, the natural objection to riding backwards, the discomfort during take-off and climb, and the psychological reaction to the obvious crash precaution.
- **The permanent economic penalty.** Burns Aero Seat Company estimates this to be about 10% more than the forward-facing counterpart of a given seat. Other estimates have ranged from three to five pounds per seat.

Is there poor passenger reaction to the aft-facing installation? The military users in the U. S. are convinced to the

contrary. Polling over 1,000 passengers by questionnaire, the USAF found that 88% favored reversing the seats to the aft-facing position in all aircraft, 8% opposed such a step, and 4% offered no opinion. Soliciting the opinion of military personnel of all ranks and both sexes, the Air Force found that 78% liked the increased visibility.

Similar results were obtained in a Royal Air Force poll covering a year's operation. The RAF found that 99% considered that the window view was better facing aft, and that the noise and effects of rough air were less noticeable. One passenger out of three felt less airsick and all others noticed no difference in this respect.

How representative these polls are of the reactions to be expected of fare-paying passengers is an unknown, but the opinion on the improved window view should not vary to a great degree and could become a strong point in attracting airline use, at least on a trial basis. The North American Airlines test should provide these answers.

New Hazards

The design uncertainties of the aft-facers still appear to be their greatest handicap. On this score, Hugh De Haven, director of Cornell University Crash Injury Research, recently offered some opinions. According to De Haven, some of the current military installations suggest hazards which may cause dangers not present in the design of improved forward-facing seats. Merely building beefed-up seats and turning them around is not the answer safety-wise, says De Haven.

Speaking of the forward facing installation, De Haven indicates that well-designed seats and secure tie-down for "20 g" safety belts should give high degrees of protection up to the point where cabin flooring and surrounding structure are destroyed.

In the U. S. the course of action for the next few years will be one of gathering the facts on experience from usage both here and abroad. The Civil Aeronautics Board will probably spearhead such a research program as the result of this year's annual review. The Air Transport Association has also acted, forming a seating committee and seeking the assistance of the National Advisory Committee for Aeronautics. The military-CAA sponsored Crash Injury Research group will continue its efforts to obtain the facts.

Abroad, particularly in Great Britain, the strong objections of the airlines to a proposed order that would require the aft-facers in all civil transports has temporarily stymied its issuance. A study of the effects of such a mandate is in progress now and no action is expected pending its completion.

Extra Section

By William D. Perreault

JERRY LEDERER'S recent reference to crew familiarity with emergency equipment, in one of his excellent bulletins, brought to mind a DC-4 familiarization class during which we took the opportunity to have each pilot open an emergency exit in the cabin. At this time we pointed out to these veteran pilots that the DC-4 exits opened in the opposite manner to those of the DC-3, a point worth their attention. One half of the men in this group admitted they had never opened one of these exits nor consciously realized in what direction they opened.

•

While the family doctor might not agree that being underweight is a good sign, Lockheed Aircraft Corp. appears justified in noting with pride that the L-1049 Super Constellations delivered to date have averaged 658 pounds under specification weights. Individual planes have ranged from 454 to 942 pounds underweight. Lockheed's sales engineers claim this provides $90,000 more potential revenue per year figured at the average weight.

•

Been wondering how high they can build those television antennas? We have. Seems as though every time we see a new one it's higher than the last. FCC's current study into the aviation hazard aspects of the antennas now under construction, 490 of them, shows only one tower scheduled to reach over 1,500 feet. There were 232 in the "under 500 feet" category, 142 in the 500/600 foot category, 33 at 600/700 feet, 34 at 700/800 feet, 14 at 800/900 feet, nine at 900/1,000 feet, 21 at 1,000/1,100 feet, two at 1,100/1,200 feet and one at 1,200/1,300 feet. Too bad that, long or short, so many of them get built so close to airports.

•

Despite high rental charges for transport aircraft today, aircraft rentals are becoming big business. The owner of a fully depreciated DC-4 finds it very profitable to sell the plane, say for $600,000, to a company that will lease it back at some nominal figure—say $20,000 a month—on a long term contract. The operator may take $300,000 cash for the plane, providing working capital for other purposes. The tax on this exchange is favorable. The purchaser pays off the remainder at $8,000 a month, during which time the operator is paying the higher rental fee. The rental fee is fully deductible as an operating expense. The only gamble is on the part of the purchaser who gambles that the resale price of the plane will hold up through the term of the contract.

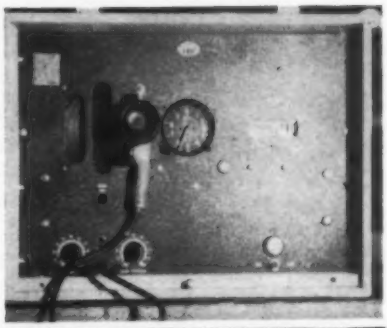
•

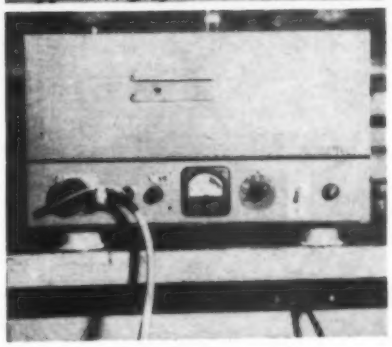
We missed a nugget that appeared in the May News Letter of the National Safety Council but which has since been reprinted by Chicago & Southern: "A live man pays 50c for a shave. It costs $5 to shave a dead man in the morgue. A wool overcoat costs $40. A wood one costs $400. A taxi trip to the theatre costs $1 for a round trip, but one to the cemetery costs $10—one way. So stay alive and save money."

•

After managing to keep fuel in the tanks of its two Douglas DC-2's for some 17 years, Swissair sold the two planes to Phoenix Airlines, a newly registered South African non-scheduled airline, in mid-August. Phoenix lost both planes in a single week because of fuel shortages. On the first leg of an all-cargo flight from Johannesburg to England, the first plane crash-landed near Bulawayo, Southern Rhodesia, after running out of fuel. The crew transferred to the second DC-2, which crash-landed the following day, as a result of fuel shortage, killing two crew members. Learning by experience, particularly repeated experiences, appears to be quite dangerous.

Maintenance Bulletin Board





ALL-AMERICAN'S SCR 522 VHF transmitter is shown above. The cable hook-up can be seen. At upper right is the control panel and at lower right is the power supply.

'Packaged' Units Cut Repair Costs

All-American Airways has found a way to save an average of $20 on each malfunction of its ground station communication equipment and at the same time solve what was fast becoming a serious manpower and expense problem.

The answer to AAA's predicament, which had kept a radio technician on the road constantly, was an equipment redesign program which resulted in a three-package system, portable to the extent that any of the three subassemblies, a control panel, the transmitter-receiver, and the power supply, can be returned to radio overhaul for repair when malfunction develops.

Back in 1950 when All-American inaugurated its final route segment, the company was faced with the maintenance of 35 VHF ground stations. No low-power VHF transmitter-receiver equipment was available and as a substitute surplus SCR 522 units were converted to AC power using an RA 62 power supply. The equipment was assembled on a standard 72-inch rack. Each time a malfunction occurred a radio technician travelled to the station to make the necessary repair.

Then, early in 1951, under the direction of R. H. Bodholdt, AAA's superintendent of communications, technicians E. Kovacic and George Kavros came up with the three-package design. The needed modifications, costing about $300 per station, were set up for the control panel and transmitter-receiver units and wooden cases were fabricated to enclose them. The a-c power supply was reworked and now includes a color-coded meter and selector switch to permit reading of the a-c line voltage as well as several of the more critical d-c supply voltages to the transmitter-receiver. An inter-connecting cable was designed to permit station personnel to disconnect and substitute a replacement for any of the three assemblies.

With the program completed early in 1952, all of AAA's stations have been provided with a simple set of check procedures. If trouble develops, these procedures permit local personnel to teletype sufficient information to the company's Washington base for technicians to establish which of the components is at fault. A replacement is then shipped aboard the next departing flight and the color-coded interconnecting cable permits immediate installation by station personnel.

The one- or two-day trouble shooting trips have been eliminated, permitting assignment of the personnel to FCC's newly required periodic servicing of low-frequency navigation aids. These requirements have increased All-American's technician staff to three, but the big work load is gone, thanks to the development of the three-package ground station equipment.

Plastic Seat Covers For In-Place Cleaning

Plastic cabin seat covers permitting a weight saving of nine pounds per airplane and costing $400 less per set than the nylon covers previously used are being introduced in All-American Airways Douglas DC-3's. Using Saran plastic for the basic cover and Naugahyde in the area formerly served by head-rest covers, AAA has completed more than 1,000 hours of service on two airplanes equipped with the covers without adverse reports and without repairs.

The principal feature of the new cover, which was manufactured for All-American by the National Parachute Loft, Washington, D. C., is in-place cleaning. Elimination of the head rest covers now permits cleaning the entire cover at each termination with a mild solution of soap and disinfectant.

Nylon seat covers cost AAA about $900 a set for the 24-seat interior. The new covers, which will be installed in the carrier's fleet of 12 DC-3's on a replacement basis, cost less than $500.

The result is a cabin seat cover which offers pleasing appearance, good wearing qualities, reduced weight, and lower costs.

Fuel Line Repair Beats New Parts

A means to repair nicked and chipped fuel injection lines used on Wright R-3350 engines in TWA's Lockheed Constellation aircraft brought Henry Lendle, an inspector at the company's Kansas City overhaul base, an award of $1,000, tops allowed in the carrier's suggestion plan.

Lendle's idea which led to the award calls for smoothing out the nicks, filling the depressions with silver solder, wrapping the affected area with silver wire, and finally coating the repair with silver solder. Suggestion Plan studies made after the repair was put into practice in March of 1951 indicate that the repaired lines give better service than new parts.

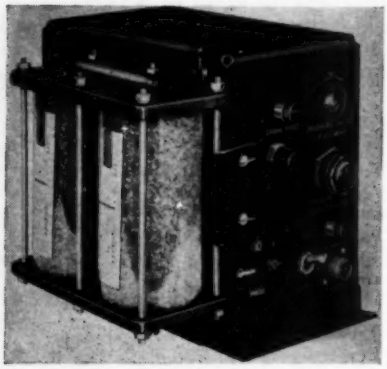
New Products

Anti-Static Solution

An anti-static and cleaning solution, called ANSTAC 2-M, designed for use in the cleaning of Lucite, Plexiglas, and other acrylic plastics, will contribute to the proper maintenance of aircraft canopies, windows, and other plastic parts, according to the manufacturer, the Chemical Development Corporation.

Applied by either brush, spray, dip, or dampened cloth, ANSTAC is intended to eliminate static which attracts dust and dirt to the charged surface and ultimately contributes to scratched surfaces. The solution is said to be non-inflammable, will not craze the thinnest molding or sheet, and requires no polishing.

Address: **Chemical Development Corporation,** Danvers, Massachusetts.



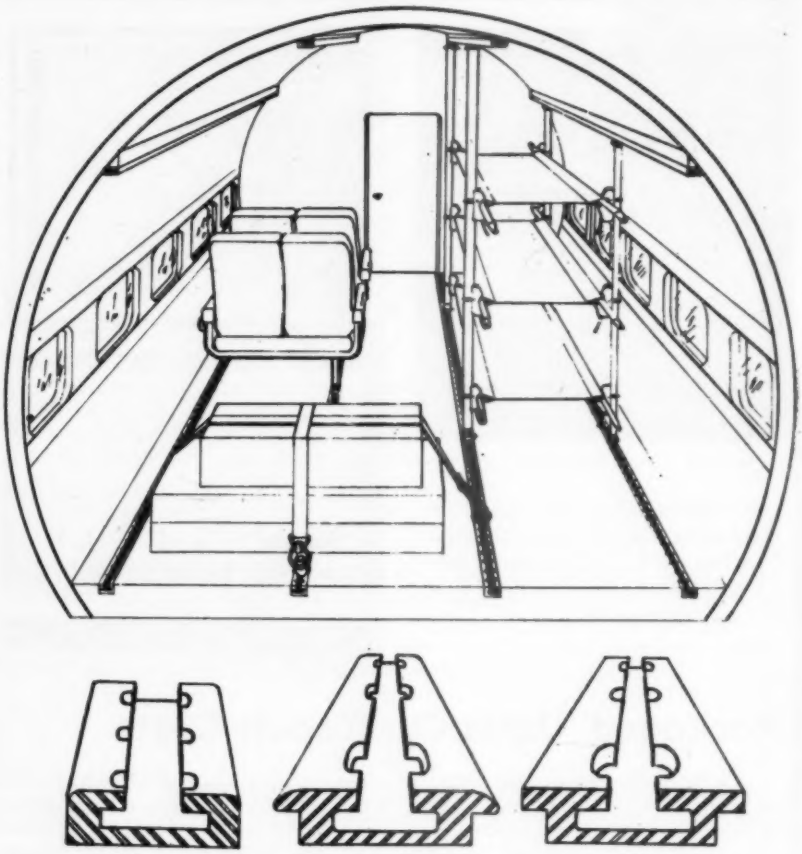
Pressurizing Kits

A series of pressurizing kits, Model RR-9500B for ground radar installations and electronic equipment and Model RR-9470 for compressing air in hydraulic oil tanks, has been announced by the Romec Division, Lear, Inc.

The former is designed to provide dry, oil-free air at elevated pressures for long periods. Its capacity is one cubic foot of free air per minute at sea level, ample to pressurize a one cubic foot vessel from 0-12 psi in 1.8 minutes at 7,000 feet altitude. Power requirements are 120 volt, 400 cycle, and weight of unit is 13 pounds. Dimensions permit installation in ½ cu. ft. area.

The model RR-9470 incorporates components similar to the RR-9500B but is designed to prevent cavitation in engine-driven hydraulic pumps by compressing the air in the hydraulic reservoir. Weighing 9.5 pounds, its capacity is 100 cu. in. per minute at 35,000 feet. Intermittent operation is said to be fully automatic, a pressure switch set at 7-8 psi start and 9.75 psi cut-off provides the control. Power requirements are 28 volt d-c.

Address: **Romec Division, Lear, Inc.,** Elyria, Ohio.



Multi-Purpose Cargo Rail Developed

A multi-purpose cargo rail designed to accommodate cargo movement and tie-down, cabin seat attachment, and litter installations is featured in Brown-Line Corporation's recently developed cargo equipment system.

Fabricated from 61ST aluminum alloy extrusion, the rail is available in three models, a surface-mounted type for installation on existing floor plates (left, above), a tapered-lip type adapted for rug hold-down (center, above), and a squared-lip type for floor plate or plywood hold-down (right, above).

Dimensions of the new rail are ½" high and 1⅜" wide. The slot width is ½" and indexing slots are provided at one-inch intervals. Strength ratings are 5,000 pounds from horizontal to vertical, and each projection is rated for 1,230 pounds down load.

The weight of the rail is 0.635 pounds per foot and when used for plywood hold-down the equivalent weight of the wood displaced is estimated to be 0.233 pounds per foot, a 33% reduction in the weight penalty involved, according to the manufacturer.

Additional weight savings are claimed for the tie-down rings the installation eliminates, its design providing for use of only those rings actually needed. An available cover plate protects the rail when not in use.

Address: **Brown-Line Corporation,** 341 N. Foothill Road, Beverly Hills, Calif.

Corrosion Protection

A solution for the protection of mild steel from corrosion, called Kelite M-2, has been introduced by Kelite Products, Inc.

Superior features over petroleum oil claimed by the manufacturer are better corrosion-inhibiting qualities, elimination of the need for drying before treatment, and impermeability to finger prints.

Applied by either immersion, spray, or brush, the M-2 solution is said to be non-phenolic, non-toxic, and non-inflammable, having a flash point of 140° F.

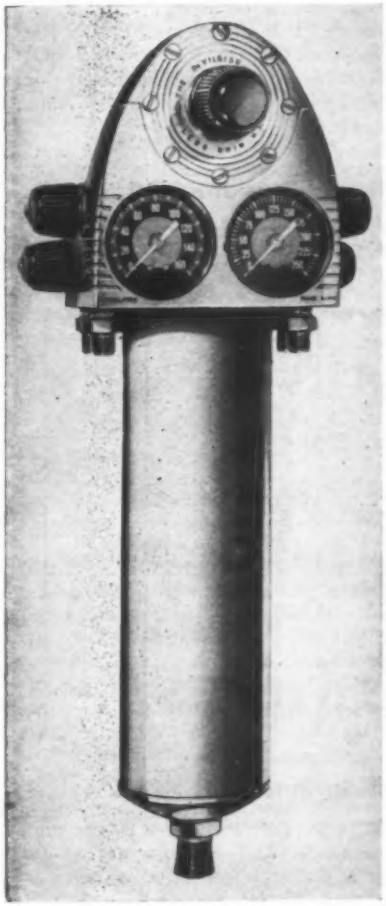
Address: **Kelite Products, Inc.,** 1250 North Main Street, Los Angeles 12, Calif.

Vibration Pick-Up

A vibration pick-up designated the MB Type 122 for use in temperatures up to 500° F has been placed on the market by the MB Manufacturing Company, Inc. With a usable frequency range of 5 to 2000 cps, the sensitivity of the pick-up is stated as 21 mv per 0.001" double amplitude per 100 cps.

Designed for either horizontal or vertical operation, the instrument has no soldered joints or connections.

Address: **MB Manufacturing Company, Inc.**, New Haven, Connecticut.

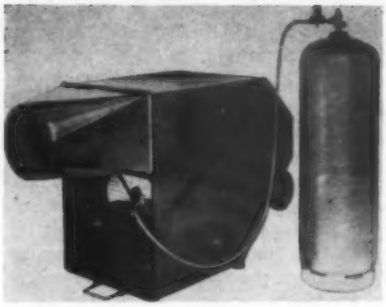


Air Transformer

An air transformer which provides two regulated and two unregulated air outlets and delivers oil- and moisture-free air to all outlets has been placed on the market by the DeVilbiss Company.

Designated the HLD air transformer, the new unit includes a two-stage regulating principle which permits finger-tip adjustment of pressures. The capacity of the transformer is 100 cfm and tests conducted by the manufacturer indicate that it will remove 97% of entrained water at 100 psi pressure. Oil and moisture trapped in the condenser tube are drained by a push-pull drain knob.

Address: **DeVilbiss Company**, Toledo, Ohio.



Portable Heater

A portable heater using liquid propane gas and called the Chinook Wind is adaptable for use in pre-heating aircraft engines.

Introduced by the International Manufacturing Company, the heater delivers 3,500 cfm at 250°, 500,000 BTU's maximum capacity. Weighing 150 pounds, the outside dimensions of the Chinook Wind are 2' wide, 3' high, and 4' deep. The liquid propane gas which it utilizes is said to provide safe and smokeless heat free from soot fumes and carbon monoxide, permitting interior and exterior use.

A 12-inch diameter flame- and waterproof canvas duct available in 12- or 24-foot lengths is available for use in preheating engines.

Address: **International Manufacturing Company,** 2249 South Delaware St., Denver, Colo.

Isolator

An instrument system isolator for use with liquid-filled pressure gauges to separate corrosive liquids from the gauge fluid has been introduced by Trans-Sonics, Inc.

Named the Type 40 Isolator, the new unit is available for line pressures up to 3,000 psi. The isolator is designed to resist corrosive liquids, such as hydrogen peroxide, and to withstand full line pressure on either side in event of failure.

Address: **Trans-Sonics, Inc.**, Bedford Airport, Bedford, Mass.

Technical Literature

AIRPORT SIGNS: "The Development of Airport Taxi Guidance Signs" by Marcus S. Gilbert and Robert E. Faucett of CAA's Airport Division describes and illustrates the proper technique for installation of signs at airports. Designated Technical Development Report No. 170, the report is put out by the Civil Aeronautics Administration Technical Development and Evaluation Center, Indianapolis, Indiana.

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SHELF STORAGE: "The Science of Economical Shelf Storage" is an illustrated 16-page catalog which deals with the uses of Rotabin rotary shelving for storage of parts, tools and materials. The brochure is put out by the Frick-Gallagher Mfg. Co., Wellston, Ohio.

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OPTICAL LEVEL: F. T. Griswold Manufacturing Company, W. Lancaster Ave., Wayne, Penna., has published catalog 30 describing its optically precise level for measuring flatness, straightness, and parallelism.

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CONTACT RIVETS: Electrical contact rivets manufactured by Gibson Electric Co., Pittsurgh 21, Penna., are described in Gibson Catalog C-521.

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MINIATURE CONNECTORS: The Advance D-1 four-page bulletin uses photos, data, dimensional drawings, and an application photo to describe a series of four miniature connectors, recently developed by Cannon Electric Company, 420 W. Ave. 33, Los Angeles, 31, for small instruments, computor circuits, etc.

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NAVIGATION DEVICES: Three new product folders prepared by Lear, Inc., 11916 West Pico Blvd., Los Angeles 64, detail the functions, operation, and use of the Lear L-2 autopilot, Lear Omnimatic and VHF communication system, and Lear Orienter ADF-12 automatic direction finder in Beech, Cessna and Piper airplanes.

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SILICONE RUBBER: Silastic Facts No. 10a, Dow Corning Corporation, Midland, Mich., is a review of the properties and performance of Dow Corning silicone rubber, as well as typical applications.

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HARD-FACING ALLOYS: Catalog No. 77 depicts the utilization of hard-facing alloys. A chart details the properties of nickel- and iron-base alloys in this well-illustrated brochure.

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AIRCRAFT-MARINE PRODUCTS: A beautifully illustrated 20-page booklet, "The Harrisburg Story" traces the growth and development of Aircraft Marine Products, Inc., 2100 Paxton St., Harrisburg, Penna., manufacturers of solderless wiring devices.

•

SIMPLE SILICONE: New Dow Corning Corp., Midland, Mich. Silicone Notebook includes information on Dow Corning 200 Fluid. Included are details on 20 different properties, handling and application.

Revenues Will Near $2 Billion: Hildred

International airlines will carry 45 million passengers during 1952 and will do 250% more revenue flying than they did five years ago, Sir William P. Hildred, director general of the International Air Transport Association, told IATA's eighth annual general meeting which opened in Geneva, Switzerland, on September 15.

Other Hildred predictions for 1952:

• **Cargo operations** will pass the 1,000,000,000 ton-kilometer mark for the first time.

• **About 275,000,000** ton-kilometers of mail will be carried.

• **The 2,500 planes** of IATA members will fly 1.7 billion kilometers.

• **A "strict guess"** is that airline revenues for the year will be "something less than $2 billion."

Airlines ended 1951 with $150,000,000 gross profit on operating revenues of $1.7 billion, but most of the profit was consumed by taxes, development expenses, financing of new equipment, and servicing of debts, Hildred said, adding that airlines must be on guard "lest the mere fact that some profits have at last been earned should be an encouragement to everybody to come and suck the yolk out of the . . . nest egg."

Speaking of Atlantic tourist service, he pointed out that there was a 50% increase in business during the first three months of operation. About 150,000 people crossed the Atlantic in May June, and July, against 100,000 in the same 1951 period. This increase was achieved by only a 10% increase in number of flights. Average number of passengers on first-class flights jumped almost 20% over last summer.

Hildred also stated that:

• **The future transport** may have to be capable of "changing from an aerodynamically clean, high-speed aircraft in the en route configuration to a low-speed aircraft for approach and landing, while still retaining its sensitivity of control.

• **IATA's traffic conferences** should meet once a year instead of twice, as at present. This would save $250,000 yearly in administrative costs, would relieve pressure on traffic vice presidents, and reduce cost of reprinting and amending tariffs.

U. S. International Revenues and Expenses, Six Months Ending June 30, 1952

Airlines	Total Operating Revenues	Passenger Revenues	U. S. Mail Revenues	Foreign Mail Revenues	Express Revenues	Freight Revenues	Excess Baggage Revenues	Non-Scheduled Transport Rev.	Total Operating Expenses	Aircraft Operating Expenses	Ground & Indirect Expenses	Net Operating Income Before Income Taxes
American	$ 2,640,091	$ 2,279,526	$ -10,732	$ 53,767	$ 1,268	$ 198,820	$ 36,737	$ 4,953	$ 2,715,778	$ 1,445,638	$ 1,270,140	$ -75,687
Braniff	4,129,272	2,782,281	1,013,930	74,082	....	189,589	73,086	....	4,935,588	2,234,806	2,700,782	-806,316
C & S	2,479,705	1,319,612	926,634	7,367	....	139,522	51,358	....	1,752,227	843,113	909,114	727,478
Colonial	767,189	707,132	29,888	6,313	....	9,237	3,127	....	812,599	324,140	488,459	-45,410
Eastern	3,529,399	2,916,202	152,787	....	....	68,419	50,243	340,310	2,716,315	1,781,561	934,754	813,044
National	818,677	768,125	3,991	....	7,082	24,809	9,605	5,065	1,035,163	282,525	752,638	-216,486
Northwest	8,753,657	4,235,108	2,647,782	314,705	29,523	1,279,982	46,865	91,816	9,347,789	4,009,294	5,338,495	-594,132
Panagra	7,478,324	6,045,837	311,400	267,729	....	544,292	193,151	1,299	7,662,229	3,516,305	4,145,924	-183,905
PAA												
Latin Amer.	32,961,183	23,360,092	3,613,500	889,162	....	3,958,616	647,440	250,921	36,479,287	16,075,951	20,403,336	-3,518,104
Atlantic	32,420,852	20,700,460	6,495,330	1,212,984	....	2,643,671	589,470	579,855	31,874,015	15,541,830	16,332,185	546,837
Pacific	19,703,283	11,455,004	5,688,650	550,902	....	1,515,644	189,512	101,653	17,691,427	10,418,490	7,272,937	2,011,856
Alaska	3,038,660	1,676,955	571,480	....	....	597,257	20,372	166,021	3,069,405	1,542,443	1,526,962	-30,745
TWA *	21,442,682	15,545,441	1,934,550	1,550,794	....	1,663,780	359,758	184,955	22,371,125	10,487,970	11,883,155	-928,443
United	4,022,929	3,535,416	299,053	....	....	123,757	22,667	....	4,797,316	2,793,179	2,004,137	-774,387
TOTALS	144,185,863	97,327,191	23,678,243	4,927,805	37,873	12,957,395	2,293,391	1,726,848	147,260,263	71,297,245	75,963,018	-3,074,400

* Compensation for the carriage of U.S. mail on TWA's international routes has been paid on basis of temporary rates since beginning of operations in February, 1946. These temporary rates may be changed upwards or downwards when permanent rates are established by CAB.

NOTE: 1. Schedules were curtailed during May because of nationwide gasoline shortage.
2. Data in above tabulations were compiled by American Aviation Publications from reports filed by the airlines with the Civil Aeronautics Board. Figures for American Airlines include that carrier's service to Mexico but not to Canada; for Braniff to South America; C & S to South America; Colonial to Bermuda; Eastern to Puerto Rico; National to Havana; Northwest to Orient and Honolulu, and United to Honolulu. Operations of U.S. carriers into Canada are included in domestic reports to CAB, in accordance with CAB filing procedures.

U. S. International Airline Traffic, Six Months Ending June 30, 1952

Airlines	Revenue Passengers	Revenue Passenger Miles	Available Seat Miles	Passenger Load Factor	U. S. Mail Ton-Miles *	Foreign Mail Ton-Miles	Express Ton-Miles	Freight Ton-Miles	Total Ton-Miles Rev. Traffic	Available Ton-Miles Flown	% Available Ton-Miles Used	Revenue Plane Miles	Scheduled Miles	% Scheduled Miles Completed
				%										
American	60,435	46,905,000	73,476,000	63.84	86,528	27,877	3,105	955,741	6,090,785	10,102,321	60.29	1,439,487	1,442,518	97.86
Braniff	16,824	36,833,000	89,125,000	41.33	206,535	26,119	....	595,260	4,975,664	12,830,190	38.78	2,097,929	2,149,833	97.58
C & S	15,620	18,756,000	34,827,000	53.85	28,404	4,175	....	547,664	2,532,993	5,292,640	47.86	817,817	829,694	98.57
Colonial	17,005	13,277,000	19,704,000	67.38	7,203	2,609	....	32,659	1,461,569	2,364,195	61.82	382,773	334,087	99.67
Eastern	49,459	70,734,000	103,905,000	68.07	242,152	....	....	311,744	7,926,049	17,126,473	46.28	1,751,381	1,522,524	97.62
National	46,870	12,157,000	22,003,000	55.25	7,663	....	20,516	109,630	1,369,949	2,784,209	49.20	391,332	409,564	92.45
Northwest	36,662	59,961,000	110,031,000	54.49	717,412	198,317	96,159	3,569,177	10,982,206	17,565,061	62.52	3,136,620	3,139,405	95.56
Panagra	59,444	66,456,000	109,843,000	60.50	210,017	142,680	....	1,165,655	8,894,033	15,253,613	58.31	2,952,153	2,929,917	99.31
PAA														
Latin Amer.	419,427	373,570,000	625,515,000	59.72	1,547,866	362,613	....	12,795,682	51,797,277	83,107,747	62.32	14,483,006	11,469,424	99.29
Atlantic	181,726	264,839,000	407,712,000	64.96	2,792,705	704,883	....	7,338,780	39,925,846	57,579,620	69.34	7,834,196	7,640,212	98.02
Pacific	47,069	163,160,000	248,202,000	65.74	2,055,140	373,004	....	3,470,824	23,805,054	39,754,967	59.88	5,062,877	4,992,362	99.67
Alaska	27,343	30,946,000	71,360,000	43.37	239,601	....	....	2,619,755	6,129,541	11,332,247	54.09	1,688,793	1,507,985	98.12
TWA	73,267	188,359,000	277,484,000	67.88	2,122,610	805,858	....	3,496,877	27,158,107	37,315,019	72.78	6,481,496	6,523,652	96.41
United	25,547	63,248,000	82,107,000	77.03	401,169	....	....	368,906	7,454,365	11,522,725	64.69	1,555,193	1,533,593	99.36
TOTALS	1,076,698	1,409,201,000	2,275,294,000	61.93	10,665,005	2,648,135	119,780	37,378,354	200,503,436	323,931,027	61.90	50,075,053	46,424,770	98.18

* Includes air parcel post.

NOTE: 1. Figures include both scheduled and non-scheduled operations.
2. Schedules were curtailed during May because of nationwide gasoline shortage.
3. Data in above tabulations were compiled by American Aviation Publications from monthly reports filed by the airlines with the Civil Aeronautics Board. Figures for American Airlines include that carrier's service to Mexico but not to Canada; for Braniff to South America; C & S to South America; Colonial to Bermuda; Eastern to Puerto Rico; National to Havana; Northwest to Orient and Honolulu, and United to Honolulu. Operations of U.S. carriers into Canada are included in domestic reports to CAB, in accordance with CAB filing procedures.

Consolidation: Whose Meat, Whose Poison?

Question of when carriers can cut station costs by combining operations is far from settled.

By WALTER A. KILRAIN

THE IDEA that two can live as cheaply as one has proved a challenge to many men, including some economy-minded airline operators, who have tried, in various ways to see whether there was any truth in the maxim. One approach, still a source of controversy in the industry, is the practice of consolidating the functions of two or more airlines at a given station in an attempt to pare operating expenses and overhead.

The technique is inevitably a complicated one. Simple enough, however, is the basic question: Can it work? In a study of the subject prepared for AMERICAN AVIATION, Donald E. Joyce, American Airlines agent at N. Y. International Airport, N. Y., surveys the problems involved and answers, "Sometimes—but don't bet on it."

Joyce

Admitting that some cases of consolidation may be economically feasible, Joyce goes on to offer an analysis of a hypothetical situation in which he feels that the arrangement would be decidedly bad medicine for the ailing balance sheet.

"*Airline A*," writes Joyce, "is a regional trunk carrier operating eight flights daily through a certain intermediate city. All flights are operated with DC-3 equipment with step doors and nose cargo loading in addition to tail cargo compartments. All flights are through operations, with refueling on demand only and no food service from this point. Certain other factors concerning the operation at this city are:

Daily hours of operation—0730 to 2400;

Average passenger boardings per month—775;

Telephone calls—average 100 per day—20 per peak hour;

Radio contacts—40 minimum per day—much higher in instrument weather;

Air freight—7,000 pounds enplaned monthly in 30 individual shipments;

Air express—2,000 pounds per month average enplaned;

Personnel—five agents and manager;

Weight and balance—prepared by station agents;

Air mail—1,000 pounds per month enplaned;

"*Airline B* is a local service carrier operating 12 through flights daily. Equipment is DC-3 step door airplanes with central point ground level loading and utilizing male flight agents. Refueling provided on request only. Other factors of the operation are as follows:

Daily hours of operation—0700 to 2300;

Average passenger boardings per month—1,173;

Telephone calls—average 190 per day—30 per peak hour;

Radio contacts—24 per day minimum in good weather;

Air freight—not carried;

Air express—12,000 pounds enplaned monthly;

Air mail—5,000 pounds per month enplaned;

Weight and Balance—prepared by flight steward;

Personnel—five agents and manager;

"Combining these two separate airlines in a consolidated station operation we find the following volume to be handled:

Passengers boarded per month—1,948 (reaches 2,767 in peak months);

Telephone calls—290 per day, 50 per peak hour;

Radio contacts—64 per day minimum (much higher in instrument weather);

Air freight—7,000 pounds per month enplaned;

Air express—14,000 pounds per month enplaned;

Air mail—6,000 pounds per month enplaned;

Weight and balance—preparation for eight flights daily of Airline A;

Total flights daily—20.

"A major factor in causing the requirement for a specialized station when the two operations are combined is the overlap of flight schedules. As many as four flights must be worked in a single hour, 0830-0930, with peaks found approaching this volume during other periods of the operating day.

Flight Departure Times

Airline		Airline	
8:38 a.m.	B....	2:08 p.m.	B
8:53 a.m.	B....	3:53 p.m.	B
9:20 a.m.	A....	6:07 p.m.	B
9:25 a.m.	B....	6:10 p.m.	A
10:04 a.m.	B....	7:00 p.m.	A
11:23 a.m.	B....	7:45 p.m.	A
12:30 a.m.	A....	8:23 p.m.	B
12:43 a.m.	B....	9:17 p.m.	B
1:08 p.m.	B....	10:11 p.m.	B
1:32 p.m.	A....	11:07 p.m.	A

"It has been assumed for the purpose of this study that this station is located in the northeastern United States where instrument flight conditions exist approximately 30% of the time causing numerous delays with resultant multiple operations over and above those scheduled.

"In order therefore adequately to cover the 20 daily flights and operations as outlined above the following minimum personnel would be required to man the combined station during the operation day from 0700-2400:

PERSONNEL REQUIREMENTS

Hours	Reservations	Ticket Counter	Operations and Ramp
0700-1530	1	1	2
0800-1630	1	1	0
1000-1830	1	0	0
1530-2400	1	1	2
DAILY TOTAL	4	3	4

"As outlined above, a minimum of 11 agents per day would be necessary on duty. This means a total of 77 shifts per week to be covered, which with a 40-hour, five-day week for each agent, would require a total of 15 agents, plus the station manager who would be required to work two agent shifts per week in addition to his management duties.

"Altogether, the consolidation operation would require, in this case, a total of 16 people to perform the duties now being separately performed by only 12 persons. It can be seen, therefore, that there are conditions where consolidated operations do not always pay, despite the rosy prospects sometimes seen before a complete examination of all conditions has been made."

What actually could be seen, re-

plied one reader of Joyce's study, was that a "complete examination of all conditions" had not yet been made.

Karins

Jack K. Karins, station manager at Colorado Springs for Continental Air Lines, found Joyce's sample case less than convincing on several scores.

"It would appear that Mr. Joyce has given a lot of thought to his subject," granted Karins, "and from the details provided would make a good consolidated station manager. He has however, overlooked several important items . . ."

Such items, Karins pointed out, as rent and utilities, which Joyce had not mentioned, might add up to annual savings of $1,880. Replacing the now-unnecessary second station manager with an agent could save, perhaps $1,200 yearly. An amount equal to the total of these figures might be saved in equipment: radio equipment, weather teletype and paper, ramp equipment, ticket stock. Total saved so far: $6,160.

Karins then went into the finer points of Joyce's personnel estimates:

"Mr. Joyce has been too conservative in his personnel requirements for Airline B. Prior to consolidation, it is noted that they have a flight departing at 0838 another at 0853 with two more at 0925 and 1004. He has taken into consideration the possibility of multiple operation after the consolidation by reflecting the required personnel to handle it. However, he has failed to consider this same condition (30% weather delays causing multiple operations over and above those scheduled) which certainly existed prior to the consolidation.

Under Staffed?

"Specifically then, using the same criterion, Airline B is understaffed by four men, using the following as a basis: Four men will be required to handle Airline B only from the period 0838 through 1004 because of frequency of operation and complexity of duties including, of course, possible multiple operations, instrument weather necessitating constant radio coverage, etc. Three men will be required on the evening shift, for a total of seven men working each day. With the station manager providing partial relief for days off, a total complement of 10 men will be required . . .

"It is noted that Mr. Joyce's closing paragraph states that four more people are needed to run the consolidated station as compared with those operated separately. Taking the information supplied herein and again considering, for explanation purposes only, the salaries of $200 per month per man, the total loss, according to him, would be $9,600 yearly. [As outlined above, we can] account for $6,160 of said loss . . . Leaving a net loss of $3,440.

"Airline B is understaffed as explained above. If we increase this to the desired and required level, we have entered the saved column to the tune of $6,160. Using his figures of total passengers boarded (average 3¼ passengers per flight) after consolidation, it would be possible to reduce counter personnel during morning hours to one instead of two, resulting in an additional savings of slightly over $2,400 annually. Total saved: $8,560.

"Additional savings, approaching the $10,000 level, could be made when such items of cost and maintainence of office furniture and fixtures are considered.

"In summary, Mr. Joyce's article is timely and contains some helpful information. He has not though, provided a complete picture. With the picture that we have, nevertheless, I disagree with his implication that his

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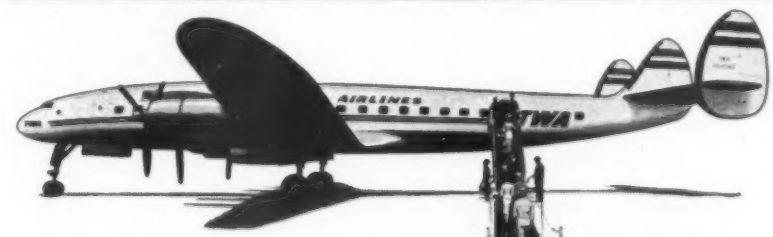

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example of consolidation won't pay. It will."

From R. W. Hardesty, operations manager of Capital Airlines, which has been a party to consolidation with 11 airlines in 17 cities during the past five years, came more general comments on what Capital has learned.

Hardesty

Though consolidation seems to be waning now, Hardesty feels that the future will see a revival.

"It has been found," he writes, "that there are certain basic fundamentals which are or should be present to interest neighbor carriers in a consolidation arrangement.

"These include:

• **"The absence of competition** at the city in question.

• **"The willingness** of one of the operators to permit all functions to be handled by another operator. This has been frequently accomplished by an arrangement whereby one carrier absorbs total responsibility for performance of all the functions at one point and the other carrier assumes a similar responsibility at the second point.

• **"The recognition** that there is oftentimes an economic advantage in effecting a consolidated operation because of the rather low potential of the community served by two or more carriers. It might be extremely difficult, if not impossible, to operate at a profit at these points unless overhead were reduced by a consolidation which would afford maximum utilization of personnel, facilities and equipment . . .

"The most attractive and most generally acceptable means of calculating rates is one usually termed "equal share of savings attained." This method is applicable whether or not both parties have existing installations in operation. If not, the non-operating carrier can estimate cost on certain tangibles and past operating experiepce. This system computes the total local direct operating costs of each carrier and totals these figures under a category of combined cost of separate installations.

"Both parties then agree on the cost of an integrated operation which is, of course, less than the sum of separate costs. The difference between the two is then divided equally, one half being the reduction in overhead achieved by the contractee, and the difference results in the rate payable by him to the contractor who will operate the combined operation. General practice allows the contractor 10 to 15% above this rate for administrative costs . . .

"The history of consolidations in other forms of transportation leads us to believe that the idea may eventually receive equal attention in the air transport industry. Certainly, there is fertile ground for the thought and efforts of those who believe that the same type of service and economic gain can be made a reality by increased interest in this field."

Tigers Get Private Money; Drop RFC Plans

The Flying Tiger Line has decided to finance the purchase of its seven Douglas DC-6A's through private sources instead of through the Reconstruction Finance Corporation. Company officials explained that the RFC application for a $7,000,000 loan was being withdrawn mainly because of the length of time it was taking to have it processed.

The private financing plans involve a $5,500,000 loan from Chase National Bank and New York Trust Company. In addition, $2,750,000 of 5½% subordinate debentures will be issued.

TCA Favors Higher Atlantic Coach Fares

A slightly higher fare during the summer season over the North Atlantic would not have discouraged traffic to any appreciable degree, W. Gordon Wood, vice president-traffic of Trans-Canada Air Lines, wrote in reply to questions submitted by AMERICAN AVIATION. Mr. Wood's reply was received too late for inclusion in the survey which appeared in the September 1 issue.

"On the basis of the estimates which were made prior to the commencement of the tourist fare scheme, it is our opinion that the present fare should be slightly higher to ensure that the tourist service operates on a sound economic basis," he said. "This matter, of course, will be carefully reviewed by the North Atlantic carriers at the traffic conference at Nice this fall."

Mr. Wood says TCA's low fare service has come up to expectations but that it would be difficult to measure at this early stage the amount of new business which can be attributed to the low fare scheme. Certain shifts in traffic peaks have occurred, he said, with extremely strong demand in both directions starting early in May.

TCA experienced some inconvenience with regard to meal charges, especially westbound with Europeans traveling with limited funds. Recently a system of meal tickets obtainable in advance was commenced and this system, by which passengers may refund unused tickets at destination, seems to be working well.

Airline Commentary

By Eric Bramley

WE WOULD LIKE to offer some criticisms and suggestions regarding airline service. They're based on quite a few thousand miles of traveling during the past summer. We hope they're constructive, because we're really aware that airlines have too often been the whipping boys for some writers who criticize just to be critical. So please bear that in mind, and here we go:

•

TICKETING: We'd like to see a further simplification of ticketing. On many occasions we stood at counters while agents laboriously wrote out our tickets. On one occasion we were buying tickets for five people, and the wait was unreasonably long, to put it mildly. This was for a trip between two heavily traveled points (on-line), so couldn't there be a simple ticket for this trip?

On another occasion, we were traveling on the return portion of a round-trip ticket. When we went to the airport counter, the agent made us out an entirely new ticket because our return trip was to involve an on-line connection. Is this necessary? Isn't it possible to get some kind of a ticket that won't give the agents writer's cramp, will save the passenger's time, and still satisfy the company's treasury department? A big order, perhaps, but we remember people who said that sell-and-record reservations would never work.

•

PASSENGER-HANDLING PROCEDURES: Seems to us that the airlines make it difficult for passengers to get onto airplanes. The disturbing thing is that procedures vary so much between airlines that it's no wonder people get confused. Some lines use gate passes, others don't; some pick up tickets at the counter, others at the gate, others on the plane. Some divide their airport ticket counters so that you go one place if you're already ticketed, and another place if you aren't. Others don't do this. Uniformity, as well as simplification, is needed.

•

IN-FLIGHT SERVICE: We've always been a protector and defender of stewardesses. A smile and a kind word from a gal can make a passenger forget any mishandling he's experienced on the ground. She's the airline's only contact with the passenger during a goodly portion of his "visit" with the carrier. In the past we've ridden with so many good gals that we still hesitate to criticize for fear that we're judging the many by the few. But—this summer we rode with 14 different stewardesses on one airline. If we were rating them A for excellent, B for average, and C for inadequate, we would hand out 13 marks of C and one of B. On other airlines (and this doesn't include those in Alaska, where the stewardesses were uniformily excellent) the marks would be B's and C's, with one B-plus and one A.

Some criticisms: aloofness, doing nothing more than was absolutely necessary, giving an impression that they were doing the passengers a favor merely by being aboard. Above all—they weren't *anticipating* the passengers' needs and filling them before being asked to do so. They were poor "hostesses" in the airlines' "homes." It all adds up to the fact that if a stewardess doesn't get a kick out of being of service to people, she shouldn't enter this kind of work in the first place.

These, we realize, are harsh words. And the gals may have some complaints—with faster equipment, it takes so much of the elapsed time to serve 50 or 60 meals that there's little time left for anything else, especially when some of them are also collecting tickets, taking names, etc. We'd like to hear their side of the story.

•

Anyway, the above are the principal items of which we're critical. Our experiences indicate that they need improvement. As to other things—schedules were reasonably on time, meals were very good, and, strange as it may seem, baggage handling was good (except at Washington National).

Discount Fight Dropped

The domestic scheduled trunk airlines have discontinued their efforts to eliminate round-trip fare discounts and have withdrawn from the Round-Trip Fare Investigation Case.

Carriers deserted the case when CAB approved their request to withdraw tariffs which originally proposed dropping the 5% round-trip discount. This action was preliminary to dismissal of the Board investigation which resulted when CAB suspended the tariffs last April. The action means that the discount provision will be maintained by the industry.

New Information Rules

Information voluntarily furnished to CAB by certificated air carriers on certain traffic and financial data embracing coach, tourist, and low-fare off-peak services may soon be a mandatory requirement by the Board. Amendment to its economic regulations to require filing of certain data for differential fare services is now under consideration by CAB.

The proposed change would set up a new supplement to CAB Form 41 entitled "Schedule C-2, Coach, Tourist, and Low Fare Off-Peak Services." Deadline for comments from interested parties is October 13 and CAB has indicated that the requirement for the proposed report is to become effective December 1.

Floor for Mail Rate

A "floor" in the mail rate formula for Trans-Pacific Airlines has been proposed by the Civil Aeronautics Board. It is designed to prevent the formula from producing a negative mail rate. TPA's present rates diminish as its passenger load factor climbs and without a cut-off point can go below zero, as occurred to the carrier in July when load factors were unusually high.

No change is contemplated by CAB in its proposed action which would affect Trans-Pacific's annual mail pay of $229,144, with such action to apply from August 12, 1952, date the carrier challenged its effective rate order.

Lake Central Delay Denied by CAB

Although Lake Central Airlines claimed that "extensive negotiations looking toward the sale" of controlling interests in the firm were in progress, CAB denied the company's request for a 30-day postponement of oral argument in the Lake Central Management Investigation on September 18.

Board stated in its reply that "after weighing the considerations set forth . . . it has been concluded that in the interest of terminating the proceeding, it must deny request for postponement."

NEW CAB DECISIONS

• **United Air Lines** was denied temporary exemption of its certificate restrictions which, if granted, would have permitted UAL to conduct non-stop service between Seattle and Chicago, passing up Salt Lake City, a present requirement. The board also suspended proposed coach fares between Seattle-Portland and Chicago-New York.

• **Northwest Airlines** was denied a temporary exemption which would have permitted service between Seattle and Portland and direct one-plane service between Seattle, Portland, Chicago, and New York.

CAB CALENDAR

Sept. 29—Hearing in Trans-Atlantic Final Mail Rate Case (Pan American and TWA). Docket 1706 et al. Washington, D. C.

Sept. 30—Hearing in Klamath Falls-Medford Service Case (United and West Coast). Docket 4191 et al. Tentative.

Sept. 30—Oral argument before the Board in Central Airlines Certificate Renewal Proceeding Docket 4083 et al. Washington, D. C.

Sept. 30—Hearing in Caribbean American Lines, Inc., Enforcement Proceeding. Docket 5657. Washington, D. C.

Oct. 7—Oral argument before the Board in Consolidated Flower Shipments, Inc.-Bay Area Investigation. Docket 4902 et al. Washington, D. C.

Oct. 9—Oral argument before the Board in Island Air Ferries, Inc., Certificate Renewal Proceeding. Docket 5083. Washington, D. C.

Oct. 13—Hearing in Fargo, N. Dak. Service Case (United Air Lines et al.) Docket 4052 et al. Tentative.

AS OF NOW . . .

Two major domestic route cases are shaping up which may alter the nation's airline route map. Both are long-time proceedings which have been reopened by CAB because the courts would not go along with original decisions. One is the **Southern Service to the West Case** in which Eastern Air Lines and others unsuccessfully sought southern transcontinental route authorizations; the other is the old Milwaukee-Chicago-New York Case now designated as the **New York-Chicago Case.**

Prehearing conferences have been held in both cases but future procedural steps hinge on CAB's handling of motions to limit or expand the proceedings. The **Southern Service case** basically involves a Miami-California interchange via Eastern-Braniff-TWA and a limited trans-Gulf route for Eastern. If expansion is permitted by CAB, it may once again involve the issue of one-carrier transcontinental service across the south.

The **New York-Chicago Case** basically involves service between Cleveland and New York. Original decision gave the route to Capital, but the courts reversed the decision on appeal of Northwest Airlines. Now carriers with applications for New York-Cleveland-Chicago service have asked consolidation of their applications and the decision is up to CAB.

• The **Trans-Atlantic Cargo Case** is another which CAB must decide whether to expedite by limiting the proceeding to the original applicants, Seaboard & Western, and Transocean, or expand to consider trans-Atlantic cargo certificate applications of European-American, Overseas National, Trans Caribbean Air Cargo, and the Flying Tiger Line. A prehearing conference was held this month but future steps were deferred pending a CAB ruling on expansion.

• The **Large Irregular Air Carrier Investigation** got underway this month with the first session of hearings in Washington still going on. With subsequent sessions due in Miami, Los Angeles, and Seattle and another one requested for Washington at the conclusion, two years is still a safe estimate for completion of the over-all case.

• The **Central Airlines Renewal Case** is set for oral argument September 30 which means a decision can be expected toward the end of the year. Central wants renewal and various route extensions including one from Texarkana to Memphis. A Board examiner recommended five-year renewal and extension to Little Rock.

• **The big battle between Pan American and W. R. Grace** over the agreement under which **Panagra** is jointly operated by the two firms is still in the New York courts. A CAB investigation of the agreement, started last year, has been suspended pending outcome of the court battle which isn't expected before December or January.

• No action has been taken as yet on applications filed May 1, this year by Slick, Flying Tiger and U. S. Airlines to amend their all-cargo certificates to permit carriage of mail. They are listed in a CAB calendar labeled **"Awaiting Action"** with hundreds of other applications, headed by one of Braniff Airways for a Chicago-Detroit route pending since August 23, 1943.

. . . W. V. H.

People

Capt. S. C. Hoyt

—OPERATIONS-MAINTENANCE—

Captain S. C. Hoyt appointed flight manager for United Air Lines at New York. He was formerly flight dispatch manager at UAL's Denver operating base.

L. B. Littrell, formerly manager of the engine division at Burbank for Pacific Airmotive Corp., promoted to general manager-aircraft operations.

Harlan Knox Perrill, who was previously with Hughes Aircraft, replaced Littrell in his former post.

Lewis E. Knerr, Jr., a member of Pan American World Airways' engineering department for the last twelve years, has been appointed airline maintenance superintendent for PAA's Latin American Division in Miami.

Fred West, promoted to station manager, Selma, Alabama, for Delta Air Lines, to replace **Clark Stewart,** transferred to Montgomery, Alabama, in the same capacity. **R. F. Bonner,** formerly station manager at Montgomery, moves to Monroe, Louisiana, relieving **E. A. Young** for his new post as station manager at Asheville.

———ADMINISTRATIVE———

William J. Prigge has been promoted by American Airlines to the post of director-budgets and costs. **Edward K. Rhatigan** has been named to succeed Prigge as eastern regional manager-reservations and ticket offices.

Dr. William J. Rees has joined Trans World Airlines' medical department at Kansas City. He replaces **Dr. John DeMotte,** who has returned to private practice.

John H. Russell, former operations executive with Trans World Airlines, named managing director-Middle East region for Transocean Air Lines. A pioneer in Transocean's flight activities in the Middle East, Russell assumes direction of Air Djibouti, Air Jordan, Air Activities, and Taloa Trading Corporation's operations in the area.

Sydney W. Taylor has become assistant general manager of Kaiser-Frazer Corp.'s aircraft division. His previous position was administrative engineer for aircraft and automotive at Willow Run.

William F. Gerety has been named assistant to the president, for outside manufacturing, of Kaman Aircraft Corp. He formerly was with United Aircraft Corp. as purchasing agent, Chance Vought Division.

Robert N. Cook, former executive officer of the Office of Airports, Civil Aeronautics Administration, appointed general manager of the newly established Washington office of the Radar Engineering Company of Miami.

Richard H. Frost of Stanley Aviation Corp., promoted from assistant chief engineer-administrative, to chief engineer for the corporation.

———TRAFFIC & SALES———

Paul W. Shoemaker was transferred as district sales manager for Capital Airlines to Lansing, Michigan from Toledo. In his new position, Shoemaker will supervise all sales activities in Lansing and the northern Michigan cities served by Capital.

James Pasley has been appointed sales promotion representative by Trans World Airlines at St. Louis.

Shaun Mahoney, agency relations manager for KLM Royal Dutch Airlines, has been named to head a newly created special agency reservations section in the company's North American division. **Sheldon Whitney,** assistant to Mahoney for the past five years, is now acting agency manager.

Stan W. Daniel, district sales manager in Indianapolis for Slick Airways, named sales rep. in Los Angeles. He is succeeded by **Robert P. Powell,** sales rep. in St. Louis.

Kenneth D. Bradshaw, regional traffic representative for KLM Royal Dutch Airlines in the Toronto area, has been named to head the company's newly opened downtown office in that city.

The following people recently completed 20 years or more service in the aviation industry:

- **M. G. ("Dan") Beard,** American Airlines. Chief engineer, New York. 25 years.
- **F. Staley,** Braniff Airways. Captain, Dallas. 20 years.
- **Roberto Ribeiro,** Panagra. Supt.-reservations, Lima, Peru. 20 years.
- **William C. Lawrence,** American Airlines. Director-development engineering, New York. 20 years.
- **B. Franson,** Trans World Airlines. Kansas City. 20 years.
- **A. T. Stubbs,** Trans World Airlines. Kansas City. 20 years.
- **M. E. Culbertson,** Trans World Airlines. Kansas City. 20 years.
- **V. L. Gunn,** Trans World Airlines. Chicago. 20 years.
- **L. M. Williams,** Trans World Airlines, Los Angeles. 20 years.
- **M. C. Williams,** Trans World Airlines. Los Angeles. 20 years.
- **C. C. Staton,** Trans World Airlines. Kansas City. 20 years.
- **V. Villnave,** Trans World Airlines. Kansas City. 20 years.
- **Constance Bersch,** United Air Lines. Accountant, Chicago. 20 years.
- **L. C. Evans,** United Air Lines. Buyer, Chicago. 20 years.
- **C. P. Kern,** United Air Lines. System aircraft router, Denver. 20 years.
- **W. G. Pool,** United Air Lines. Lead line mechanic, Omaha. 20 years.
- **A. H. Shaw,** United Air Lines. Lead shop mechanic, San Francisco. 20 Years.
- **Dr. W. Bailey Oswald,** Douglas Aircraft Co. Chief aerodynamicist. Santa Monica. 20 years

W. B. Oswald

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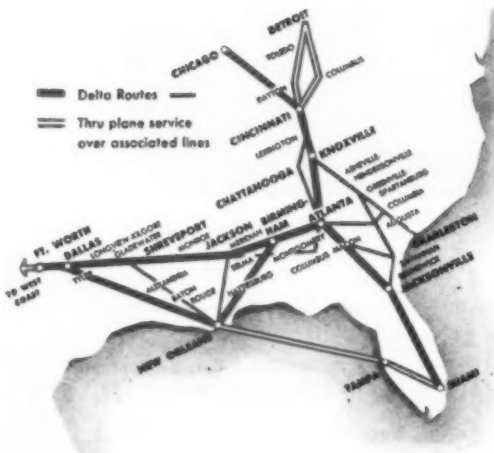

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Formerly Eastern Sales Manager of United Aircraft Products, Inc., and more recently Manager of Airframe Supply Co., he also has seven years of experience with Bendix Products Division as Project Engineer, after leaving Purdue University.

During World War II he served as special engineering adviser to 20th Air Force Headquarters on Guam.

During his thirteen years with the aircraft industry, he has handled engineering, sales, service, and production responsibility with major engine and airframe companies, airlines, and the military services for manufacturers of products ranging from fuel metering systems, heat exchangers, oil systems, and magnetic inspection equipment to electrical devices, shaft seals, precision rubber products, and fasteners.

He will be located in the advertising offices of the publications at LaGuardia Airport, New York City.

Gertrude Mackenzie *has been appointed Sales Promotion Manager for American Aviation Publications.*

Formerly associated with William Esty & Company, Young & Rubicam, Inc., and TIME, Inc., serving national industrial and consumer accounts, Miss Mackenzie has had previous experience in heavy New England industry as Assistant Purchasing Agent of Saco-Lowell, world's largest textile machinery manufacturers.

Having founded the presently active firm of Mackenzie and Mignault, public relations, in New England in 1948, she recently returned to the New York area where she free-lanced among major advertising agencies, writing new business conceptions and presentations, ranging in products from drug to automotive, for all media—nationwide, industrywide.

She was graduated from Wells College in 1938 with honors in Philosophy.

Miss Mackenzie will handle all sales promotion for AMERICAN AVIATION MAGAZINE, AMERICAN AVIATION DIRECTORY, and OFFICIAL AIRLINE GUIDE.

Mackenzie

American Aviation Publications, Inc. ***Washington, D. C.***

Advertising Offices: LaGuardia Airport, New York City

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Vickers Model AA-31306-H
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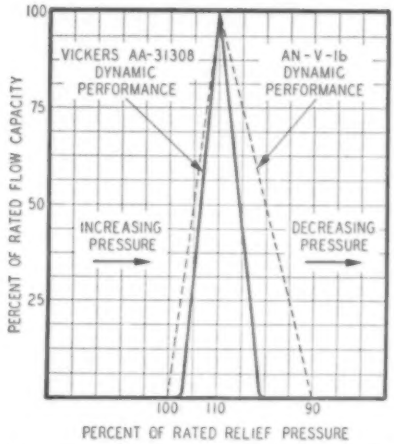

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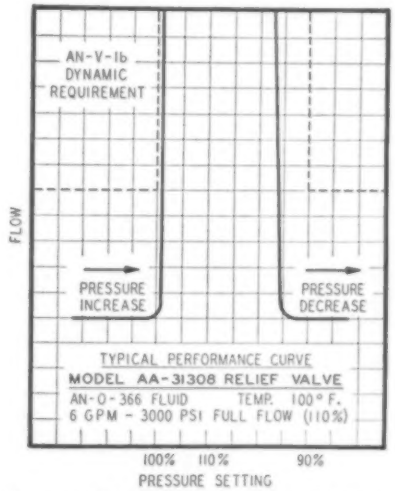

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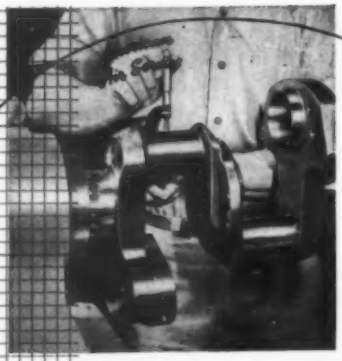

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AEP

First Flights Due For New Aircraft

Several of the newest military planes are scheduled to make their first flights within the next few months. The Hughes XH-17 flying crane helicopter has already gotten a few feet off the ground for a few minutes on its maiden flight.

Convair's R3Y, transport version of the XP5Y-1 turboprop patrol bomber, is scheduled to take to the air next March for the first time. Before that, however, two units for static testing will be tried out. December 1 is the scheduled delivery date for a complete hull mated to a stub wing and a complete wing mated to a stub hull. These two will precede testing of the flight craft.

Douglas' twin-jet A3D carrier bomber is slated to take to the air sometime this fall and the USAF version, the RB-66, will probably follow soon after that.

Cessna Sales Up

Cessna Aircraft Company reports the largest unit and dollar volume for any month of the year in August when retail private plane sales went in excess of $1,500,000. The company maintains that this has helped it retain its top sales position in the lightplane industry, claiming it has led in sales every month of 1952.

The company's total military and commercial sales for the 10 months ending July were $33,500,000, representing an 80% increase over the same period in 1951.

Canadair Subcontract

Beech Aircraft Corp., producer of T-33 jet trainer wings for Lockheed Aircraft Corp., has been given a similar contract by Canadair, Ltd., of Montreal. Beech will build 200 wings for the Canadair version of the T-33.

Canadair's original contract for T-33 wings (about 600 in all) has been let to Ford Motor Co. of Canada but was later cancelled. Later Canadair decided to try to produce all the wings itself but found some would have to be subcontracted to maintain production schedules.

Convair 340 Sales

Convair 340 sales have risen to 175 with an order for three placed by Jugoslovenski Aero Transport, the Yugoslav flag carrier. Sales of the 340 and related spares now total $100,000,000 for a period of 18 months. Consolidated Vultee Aircraft Corporation's customers for the 340 and the 240 now number 30.

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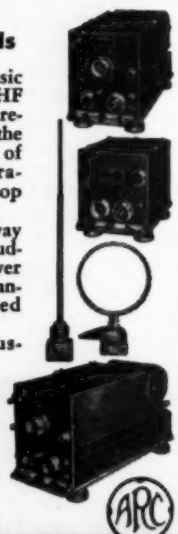

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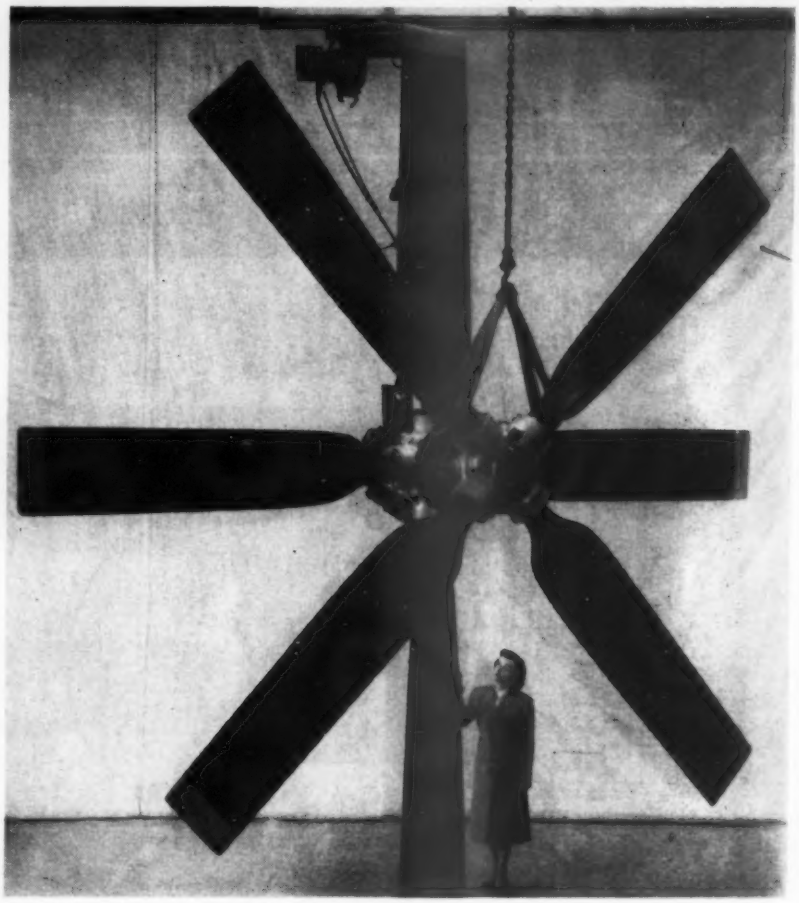

Eighteen-foot, eight-bladed Turbolectric propeller is one of the largest in a new series announced by Curtiss-Wright for use with forthcoming turboprop engines. Model shown above is capable of harnessing up to 15,000 hp. New extrusion process developed by C-W in cooperation with the USAF produced the hollow-steel blades.

GM's Allison and Aeroproducts Merged

Merger of General Motors Corp.'s two main aircraft divisions, Allison (engines) at Indianapolis and Aeroproducts (propellers) at Dayton has been announced by C. E. Wilson, GM's president. He indicated the Dayton plant will be placed under the jurisdiction of the Allison facility, headed by E. B. Newill, Allison general manager and company vice president, and will be called the Aeroproducts-Allison Division.

Engineering staffs and test facilities of the two installations are to be more closely coordinated, Wilson said, and this is expected to give better service to both the armed services and aircraft manufacturers. Part of the Aeroproducts plant is to be used for production of Allison jet and turboprop engine parts and sub-assemblies.

Ford to Build New Westinghouse Jet

The new J-40 Westinghouse jet engine, which probably produces about 8,500 pounds of thrust without the use

of the afterburner, is also to be produced by two Ford Motor Co. divisions. The Ford Motor Division at Romulus, Mich., and the Lincoln-Mercury plant at Wayne, Mich., are both destined to put the more powerful J-40 into production. The new engine is to be used in the Douglas F4D delta-wing Skyray, the McDonnell F3H, and the Douglas A3D.

Douglas, however, has asked the Navy to consider using the Pratt & Whitney J-57 instead of the J-40 in the F4D because of delayed J-40 deliveries. And Douglas has also suggested the use of the J-57 as the power plant for its A3D light carrier jet bomber because it is convinced the J-57 is better suited for that plane. The Air Force uses the Allison J-71 engine in its version of the A3D, the RB-66.

P & W Engine Deliveries Return to Normal

Pratt & Whitney Aircraft, which had notified its customers for the R-2800-CB 16 engine that deliveries would be delayed because of the recent steel strike, has sent out new delivery schedules for the engine which show production will start returning to normal in November.

Consolidated Vultee, which had been building toward production of eight 340's a month when P&W's notification came in July, has been informed it will receive one engine in September, two in October, 12 in November, and 18 in December. Douglas, which had been receiving enough CB-16's for five or six DC-6B's a month in July, has received similar word from P&W.

McDonnell F-101 Escort Fighters Ordered

Confirmation of a production order to McDonnell Aircraft Corp. for an undisclosed number of F-101 fighters designed to escort bombers on long range missions has been made by the Air Force. The F-101 is a modified version of the McDonnell XF-88 which was first test flown in 1948 and later shelved during an economy drive.

No current USAF fighter was designed specifically for bomber escort and attack on distant targets; the Republic F-84G is now used for that purpose. With in-flight refueling the Thunderjet G model has enough range to accomplish the mission but is slightly deficient in speed. The new F-101, however, will exceed 700 mph and should therefore have no trouble keeping up with bombers flying at near-sonic speeds.

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International Report

Tomorrow's transport? Slated for adoption as a transport aircraft, the Vickers Valiant bomber is a 600 mph plane. Second prototype of the jet plane is now being flight tested and production is being readied on a "super-priority" basis. Transport versions would accommodate 96 passengers or 155 troops.

BOAC Chairman Looks Into Future

In a look beyond the era of the de Havilland Comet and the Bristol Britannia, Sir Miles Thomas, chairman of British Overseas Airways Corporation, has revealed that British engine manufacturers are trying to "combine the virtues of the airscrew-turbine with the pure jet so that the turbines themselves deliver, as it were, a thicker, heavier column of gas . . . providing a more solid thrust at take-off speeds and improved economies in fuel consumption at normal cruising conditions of 500 mph."

Some attempts employ compounded turbines and compressors, while others by-pass air from compressors direct into the jet stream to increase thrust, he said. Describing the helicopter as "a very complicated piece of mechanism," Sir Miles suggested that the rotor might be replaced by "a very large volume, low-velocity turbine efflux." Downward-hinging jet pipes in connection with high-lift wings "represent a fallow field for thought," he added.

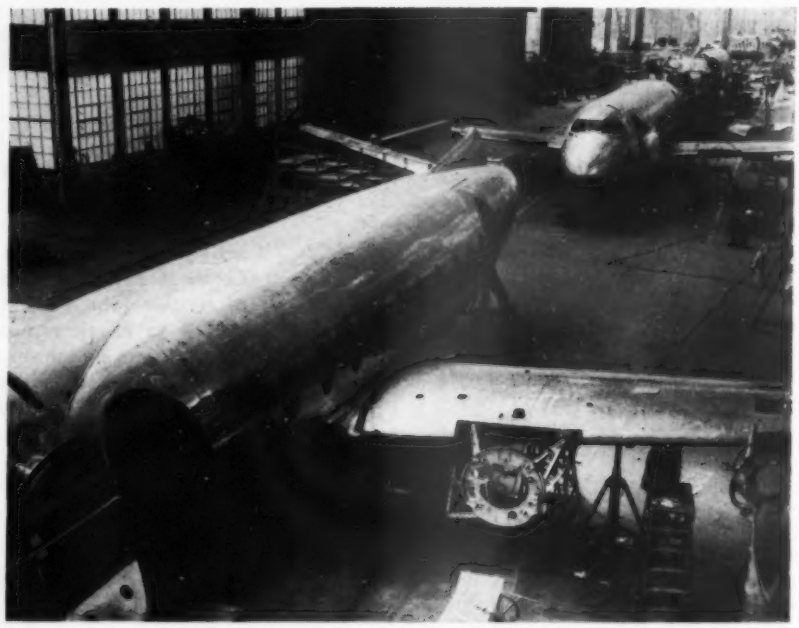
The BOAC chairman emphasized that the airliner of the future "must have enough duration of flight and, equally important, reliability so that its utilization will be about eight hours a day or more." He emphasized that the saving of time by increases in speed above the present (500 mph) level must be weighed carefully against their cost: "The problem boils down to transporting the maximum number of passengers as fast as possible over the longest stretch practicable without striking the hump of rapidly rising costs."

Germans, S. Africans Start Airline

Although officially forbidden to resume airline operations until the ratification of the "peace contract," the Germans have found a way to start flying again by the formation in Johannesburg of an independent operator known as German-South African Airlines (Pty.) Ltd., backed with German and South African capital.

One of the principal shareholders is Major-General Baron Frederik Wilhelm von Mellenthin, once Rommel's chief of staff and one of the most versatile officers of the Wehrmacht, who is now living in Johannesburg. German-South African plans to buy four-engine pressurized equipment to replace the Douglas DC-3's it has chartered. These planes are being used to fly non-scheduled services between Johannesburg, South-West Africa (a former German colony) and Frankfurt.

Meanwhile in Germany there are indications that orders for transport aircraft are about to be placed. Top Lockheed men recently visited Bonn and German officials have had talks with Vickers-Armstrongs.



Turboprop production progress. Vickers-Armstrongs Ltd. is now well along in the production of the Viscount. First planes off the line are going to British European Airways (which has ordered 26). Other airlines that have ordered the turboprop transport are Air France (12), Trans-Australia Airlines (6) and Aer Lingus (4).

ADVERTISERS

ADVERTISER	PAGE
Airwork Corporation	56
Aircraft Radio Corporation	50
Aircraft Engine & Parts Corp.	49
B G Corporation	Second Cover
Breeze Corporation, Inc.	5
Chase Aircraft Company	30
Continental Motors Corp.	51
Consolidated Vultee Aircraft Corp.	Third Cover
Delta Air Lines, Inc.	45
Flightex Fabrics, Inc.	49
Fairchild Engine & Airplane Corp. Fairchild Engine Division	3
B. F. Goodrich Company, The	14
Hamilton Standard Division United Aircraft Corporation	11
Lockheed Aircraft Corp.	32, 33
Hotel Lexington	50
Monsanto Chemical Company	48
National Airlines, Inc.	41
National Car Rental System, Inc.	40
Swedlow Plastics Company	9
Sikorsky Aircraft Division United Aircraft Corporation	7
Simmonds Aerocessories, Inc.	12
Temco Aircraft Company	55
The Texas Company	Back Cover
Trans World Airlines, Inc.	41
United Air Lines	28, 29
Vickers, Incorporated	47
Westinghouse Electric Corp.	24, 25

PHOTO CREDITS

(In the case of more than one credit to a page, read credits from left to right and top to bottom of page)

p. 6—Ankers

p. 15—far left, Harris & Ewing; third from left, Nichols

p. 18—Vickers-Armstrongs

p. 19—bottom, de Havilland

p. 20—U. S. Information

p. 21—Stuckey

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the bulletin board

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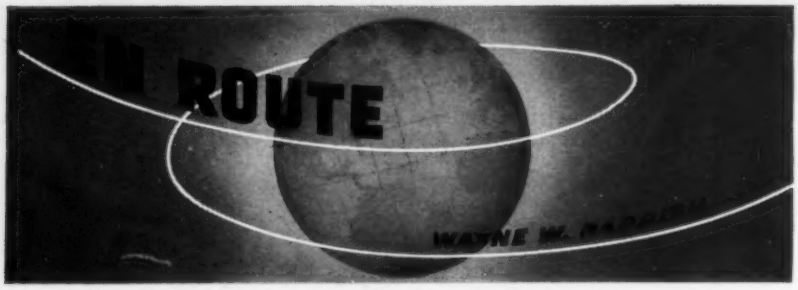

Birthday in Paris. Last May 2 I had a birthday to celebrate a certain number of years which is growing too high to suit me, and I happened to be in Paris on that day. I had mentioned the birthday casually in advance to **Jean-Marie Riche**, the very smart, intelligent, and personable French correspondent for American Aviation Publications. Jean-Marie set about to see that my birthday was celebrated in style.

It all started with a cocktail party in the apartment of TWA's incomparable **Mimi Romedenne**. We then moved on to a rather fabulous place called La Table du Roy for dinner. This restaurant is presided over by a very roly-poly chef and is a popular place for reasons of excellent food and wines, and the show put on with the aid of guests.

Le Cardinal. Jean-Marie had it all fixed up that I would be called to the front of the restaurant and fixed up as Cardinal Richelieu. A very attractive Swedish gal was made the queen and another patron, an American, I believe, was made the king. A local Parisian gal was made the jester and she didn't like the honor one whit. I had to hold a big bottle of Courvoisier brandy, which I didn't get to keep, and the chef performed a lot of rites in French. The ceremony ended up by all of us having to drink rapidly a tankard of champagne, which proved to be no difficult chore.

Meantime Jean-Marie and Mimi and my wife and a bunch of TWA guys were having a great time shouting rude things to me in my public predicament. This gang included **Jerry Thornton**, TWA's director for sales in Europe; **George Lambert**, traffic manager for Paris; **Jim Nolan**, pubrel in Paris; **John de Gourcuff**, also pubrel in Paris; and **Ed Boughton**, of the TWA pubrel office in New York.

La Table du Roy is at 10 Cite d'Antin in Paris and is a first class place to eat. Thanks to Jean-Marie, I had such a fine birthday celebration I thought I was ten years younger.

Bargain Postage. The French have an intricate postal system with post card rates to fit every purse. I discovered this in the walled town of Carcassone and from then on I saved myself a few pennies by cutting out a few words on post cards. (I'm like the housewife who traveled a hundred miles to save 50¢ on a purchase.)

A post card for delivery within France with only the date and your signature (and address, of course) costs only about one and one-fourth U. S. cents in postage. If you add five words of greeting to the date and signature, the charge is two cents. For three cents you can write all you want on the card. For cards going out of France, the postage is a cent and a half with date, signature, and five words, and four and a half cents for unlimited writing. So when I began putting on weight I mailed a card to **Dr. Ludwig Lederer** at Washington National Airport just saying "Get those reducing pills ready." If I had added "Regards" it would have cost me three cents more. (Now you understand, Doc!)

Paper Currency. The French are supposed to be tight-fisted, but I now know the reason why. It's that dad-blamed currency. You get anywhere between 350 and 400 francs for a dollar, the latter being the black market rate, and if you exchange fifty or a hundred dollars you get a big mass of paper money that gives you an immediate feeling of being wealthy. The paper money comes in all sizes, the lowest being five francs, which is about a penny, but pretty soon you find that this paper money starts going awfully fast.

So you try to keep the various denominations segregated and keep getting rid of as much small stuff as possible, otherwise it starts bulging out of pockets.

Pretty soon you are a slave to this mass of paper money and begin holding on to it like a scrooge. Naturally you want to know how much you're paying in terms of U. S. dollars, so your mind makes several calculations with each transaction, one calculation being what the stuff is costing at the official rate and the other calculation what it would have cost if you had had the foresight of getting black market francs at a better rate.

Baffling Calculations. Something that is marked at 3,500 francs actually costs $10.00, but then you try to figure if you had been smart and gotten 400 francs for the dollar it would have cost $8.75. It can get pretty involved, and you become so confused in trying to keep things accurate that you forget that ten francs is under three cents.

I remember buying a tank full of gas in a small town, and at 65c a gallon the bill was rather hefty, and the guy owed me one franc in change and didn't intend to pay it. One franc is about one-fourth of an American cent. I insisted on getting it. His look indicated he thought I was nuts. I guess I was. But you get so involved in the mass of paper money that a franc, which seemed to be a token of the kind of wealth you throw around, becomes something to hoard. I got as tight-fisted as the French. Nobody was going to cut me out of a piece of tin worth a quarter of a cent.

I often hear that tourists are gypped in Europe and I imagine this is so, but the fault often rests with the tourist himself. So many Americans bring it on themselves. I've found very few instances of being gypped, or attempts at it, and on my motor trip through France in May I tried to watch the bills and my change in the same way I do at home.

Only once was I "taken" and that was in a village far up in a valley in the Pyrenees. I stopped at a gas station for gas and oil and the old buzzard running the station charged me correctly for the gas, since there was a sign giving the prices very clearly, but took me for about seventy-five cents extra for the oil. I was in a hurry and didn't realize what happened until I was miles down the road.

The guy probably needed the 75c, so I don't regret the contribution to his welfare, but the principle always burns you up. Nobody likes to be taken, but the average small French merchant, while sharp and canny in his own way, is quite honest in his dealing with tourists.

CHAMPAGNE for a birthday in Paris . . . for Le Cardinal.

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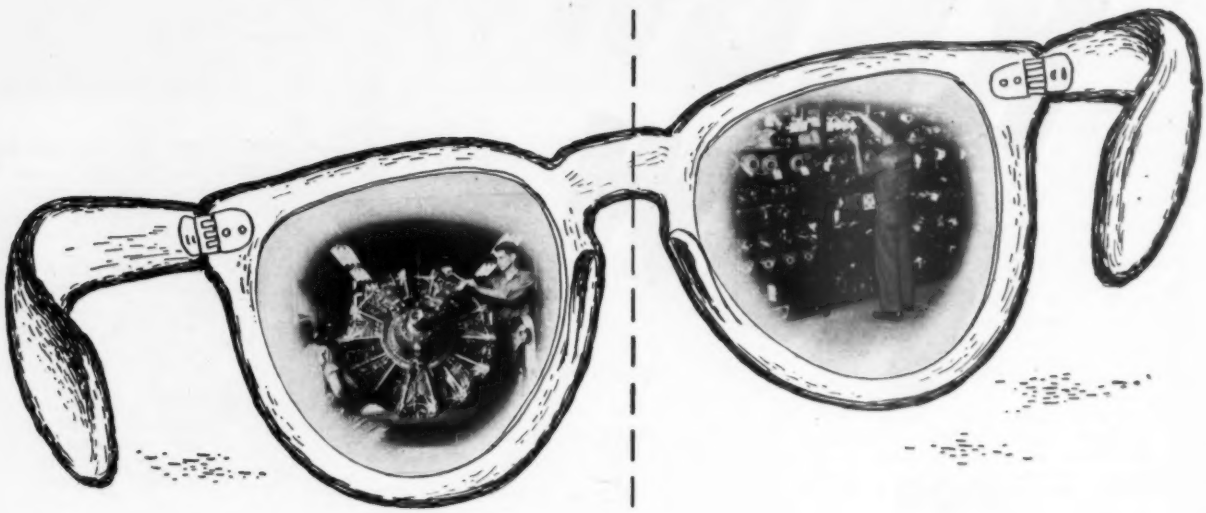

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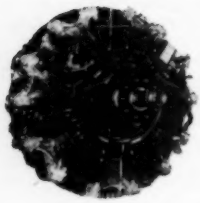

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News At Deadline

Strike Deadline for TWA Flight Engineers

A strike of some 350 TWA flight engineers is scheduled for midnight, September 29, and suspension of some domestic and many international flights is possible as a result. The strike notice was presented by the TWA local of the Flight Engineers International Association-AFL.

Earlier efforts of a Presidential fact-finding board had proved to be fruitless, since its recommendations were not binding. The board had recommended a 10% wage boost to a wage scale of $465 to $770 a month for the flight engineers. The union has been asking $620 to $820. The contract ended last May and was extended while negotiations went on.

Lockheed, Douglas Talks Breakoff; Goodyear Out

A breakdown of negotiations between the AFL-Machinists, Lockheed and Douglas-El Segundo, a walkout of 3,500 CIO-Autoworkers at Goodyear Aircraft in Akron, and the beginnings of a back-to-work movement which fizzled at El Segundo marked the industry labor situation.

John Snider, President of IAM Local 727 at Lockheed-Burbank, declared that Lockheed "is in collusion with . . . airframe manufacturers in the Los Angeles area in an all-out conspiracy to fix wages." He demanded a government fact-finding panel or similar group.

IAM insurgents at El Segundo called for the return to work of about 2,000 of the 13,000 striking workers, but without noticeable effect.

At Goodyear Aircraft, the UAW struck after rejecting a new contract for a 10c hourly pay boost.

Other issues involve the union shop and automatic wage progression.

Industry Far From Saturated: Ramsey

More than 10,000 planes have been delivered to the military since the outbreak of war in Korea, according to Adm. DeWitt C. Ramsey, president of the Aircraft Industries Association.

Production of bombers and fighters for the Air Force has increased fivefold during that time, Ramsey declares in the current issue of *Planes*, AIA publication. Despite this output, which will reach a peak of slightly over 1,000 deliveries a month this December, the industry is far from saturated. By the first quarter of 1954 the industry will have more than trebled its pre-Korean work force, reaching a total of 875,000 by January of that year.

X-3 Prepares for Flight

The Douglas X-3, a research plane designed for speeds above 2,000 mph, has arrived at Edwards Air Force Base, California, from which it is expected to make its initial flight this fall. The plane is expected to better the record of the Douglas D-558-11, which has a top speed of 1,238 mph, although original design criteria have been revised in this prototype model.

New Missiles Revealed

The "new era" of guided-missile warfare in Korea, in which pilotless Gruman F6F's are being used with television cameras, is actually no newer than 1945. In that year the Air Force used remote-controlled bombers in nine missions against Germany.

There are, however, new missiles in production, including the Northrop XB-62 "Snark" and Bell XB-63 "Rascal." Both are pilotless bombers, the "Snark" being designed for ground-to-ground missions, and the "Rascal" air-to-ground.

APB Study hit again; Sapphire Engine lags

The Aircraft Production Board's study of which plane types should be cut out of the plane program was completely defeated at the September 19 meeting of the APB attended by Roswell L. Kilpatric, USAF Undersecretary. In a pre-meeting press conference, Gilpatric observed, "I think the zest will go out of that whole subject very shortly."

Gilpatric admitted that the program for the Curtiss-Wright J-65 engine, the Sapphire, is one year behind schedule, but noted that it was not the company's fault. He declared that both C-W and the USAF had been over-optimistic about the schedule. The first Sapphires have recently been produced by both C-W and Buick.

A production order has been placed for the C-W J-57 Olympus jet engine, it was revealed, but large-scale production is two years away, according to Lt. Gen. Orval R. Cook, Deputy Chief of Staff-Materiel.

It was also revealed that the first B-47 wing will be operational before the end of 1952, that production of F-84's and F-86's is now 250 a month, and that 28% of fiscal 1953's funds were allocated by the USAF during the first two months of the current fiscal year.

Atlas to Buy Babb Company Stock

Arrangements for the purchase of all the stock of the Babb Company, Inc. by the Atlas Corp. "or an associate company" have been entered into. The announcement was made jointly by Floyd Odlum, President of Atlas, and Charles H. Babb, President of the Babb firm.

Odlum said there would be no change in the Babb management as presently constituted. Mr. Babb will continue as head of the firm, and Edward H. Lund, Vice President, will continue as manager of its eastern branches, with headquarters at Newark, N. J.

The Babb Co. claims to be the worlds largest dealer in new and used aircraft, aircraft engines, parts, and accessories.

Sales Up 92% For Lockheed

Sales by Lockheed Aircraft Corp. were up 92% in the first six months of 1952, as compared to the same period in 1951. Dollar total hit $188,629,000, President Robert E. Gross revealed in a stockholders report.

Earnings after taxes were $15 a share, or a total of $2.6 million. This marks an increase of 10c per share over the adjusted figure for the same period in 1951.

Lockheed's backlog stood at $1.5 billion at the end of the six month period; orders since then will raise it to close to $1.8 billion.

Northwest Admonished In Accident Report

Northwest Airlines has been admonished by the CAB for exceeding allowable overhaul times on certain components of an engine which was feathered on one of the carrier's DC-4's before a crash in British Columbia last January 19. Due to a clerical error, the Board report concluded, the components had been operated 225 hours and 16 minutes in excess of the 1,500 hours allowed.

The accident was attributed to a high approach to the airstrip at Sands-

pit, B. C., followed by an attempt to climb on three engines with insufficient air-speed. The plane settled into the water, where 33 of the 40 passengers died. The report also described and criticized the lack of preparations for ditching

Arctic USAF Base Built with Airlift

An Air Force base at Thule, Greenland, only 930 miles from the true North Pole, has been announced by the Air Force. Believed to be designed for use by the heavy bombers of the Strategic Air Command, the base's existence has been known of unofficially for some time.

An air lift speeded work on the base by approximately one year, since the spot is served by sea transport for only two months out of the year. MATS' 1600th Air Transport Wing flew nearly 2,000 round trips to the base, carrying 25,000,000 pounds of payload. Largest item was a 10-ton GCA unit carried by a C-124.

All U. S. Control Area?

The Aircraft Owners and Pilots Association has proposed that the Civil Aeronautics Administration declare all of the United States a control area at a 3,000- or 4,000-foot minimum. AOPA feels that this would equalize the consistent changes being made in VFR operations in control areas being extended because of increased jet operations. Such a step would eliminate the necessity of forcing private pilots flying VFR to install two-way radio.

McGregor to Head IATA

Newly elected president of IATA for 1953-54 is Gordon McGregor, president of Trans-Canada Air Lines. McGregor, elected at the eighth annual general meeting of the association, succeeds Walter Berchtold, Swissair head, who assumed the 1952-53 presidency during the meeting.

Boeing Head Hits Year-to-Year Buying

The present practise of making Congressional appropriations for aircraft buying on a year-to-year basis is keeping the aircraft industry in "a state of inherent and expensive insecurity," according to William M. Allen, president of Boeing Airplane Co.

In a speech before the annual convention of the American Bar Association, Allen called for an end to such "one-year programs." He also called for curtailment of non-essential civilian production and an end to the rise in labor costs, which have risen 60% in the past seven years.

Airport Work Estimated

There are 4,815 civil airports in the U. S. and its territories that need construction and improvement projects during the next three years, according to the CAA's 1952 revision of the National Airport Plan. Estimated cost would be $650,600,000.

The annual revision is used as a guide by CAA in developing the Federal-aid airport program.

TCA: Viscount Counted Out; CV340 Likely

Trans-Canada Air Lines has turned its attention from the Vickers Viscount to the Convair 340 because of the far-off delivery dates of the former aircraft. The Canadian carrier is also interested in the Bristol Britannia, according to president Gordon R. McGregor. Britain is "two years ahead in design but already two years behind in production," he observed.

Possible solution to delivery problems would be Canadian production, McGregor feels. A step in this direction was indicated as Canadair Ltd. confirmed that it is negotiating with Bristol Aeroplane Co. to build the Britannia or a modification of it in Montreal. The modification is understood to involve substituting Wright compound engines for the Bristol Proteus turboprops in aircraft built for the RCAF.

A new model of the Britannia, it is learned, will offer a stretched fuselage and will gross up to 30,000 pounds more than the current 140,000-pound version. With the fuselage extended from its present 114 feet to 123 feet, the plane will up its passenger accommodations from 104 to 128.

Jets to S. A. in '54

South America may get jet transport service before the United States or Canada, according to an announcement that BOAC plans to use Comet II's on the England-South America route "early in 1954." The news came from BOAC's chairman of the board, Sir Miles Thomas, who also stated that the carrier plans to have 120-passenger jet transports in service by 1960, with ranges of 5,000 miles.

Sweden to Get Venoms

Sweden will receive a "considerable number" of de Havilland Venom all-weather fighters beginning this fall. Deliveries will run parallel with shipments to the RAF. The Swedish license-built Ghost engine will power the aircraft, which will be designated the J-33.

Quantity sales of British jets outside of NATO have been rare, with the exception of Vampires sold to Switzerland and Sweden just after the war.

Traffic Survey Ready

The Air Transport Association has published the "Origination and Destination Airline Traffic Survey of Revenue Passengers for September 1950" in five volumes. The twice-yearly survey was previously published by the CAB. Copies are obtainable from ATA's Washington offices at $25 plus postage.

Cook Leaves CAA Post For Private Industry

The Civil Aeronautics Administration has received the resignation of Robert N. Cook, executive officer of the Office of Airports, who is leaving government service after 17 years to become general manager of the new Washington officer of the Radar Engineering Company of Miami, Fla., on October 3.

USAF Aids C-46 Tests

Tests designed to improve the C-46 will be conducted with a C-46D provided by the Air Force. The CAB had recently asked the USAF to provide such a plane for use by the C-46 Engineering Foundation, an organization formed by the non-scheduled airlines to eliminate "deficiencies" in the aircraft.

Barringer's New Post

J. Paul Barringer has been named to succeed Walter Radius as director of the State Department's Office of Transport and Communications policy, in charge of international aviation matters, telecommunications, and ocean shipping. After attending the National War College, Radius had been appointed director of the management staff of the State Department.

Comet Crews Increase

Comet crew members fully trained for operations now number 135 in BOAC. An additional 70 are now undergoing training. The conversion course for pilots lasts 16 weeks and includes gas turbine study, specialist Comet training with de Havilland, a cruise control navigation course, local and overseas flying training, and route familiarization.

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